BUTANE-PROPANE News

HEADQUARTERS FOR LP-GAS INFORMATION SINCE 1931

L. C. RONEY INC.
511 S. REDONDO BLVD.
INGLEWOOD, CALIF.

NOVEMBER, 1946

A PERFORMANCE STORY THAT SPEAKS VOLUMES!

Performance records—they tell a story of cylinder success. A story that features precision manufacture, sound designing, X-ray controlled welding, minimum seam area. But the chief feature of this success story is EXPERIENCE.

It is experience in design, manufacture and research that makes the Hackney Cylinder what it is in the industry. This experience in cylinder manufacture has been compiled for over a period of 44 years, assuring unrivaled skill and knowledge in making containers for the transportation and storage of liquefied petroleum gas. As a result, the Hackney Cylinder is distinguished by correct design, proper balance between light weight and strength, easy handling and low transportation costs. This experience forms the basis on which Pressed Steel Tank Company engineers are constantly developing improvements for the future.

There is no substitute for Hackney experience.

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Manufacturers of Hackney Products

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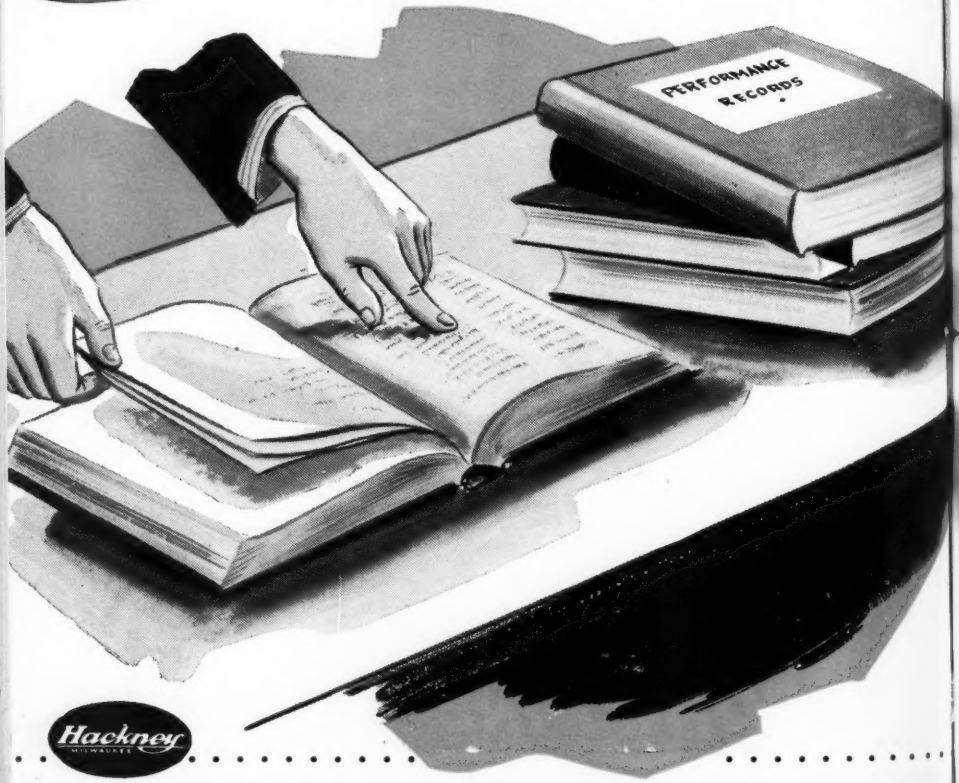
208 S. La Salle St., Room 2069, Chicago 4 **552 Roosevelt Bldg., Los Angeles 14**



Hackney
MILWAUKEE

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

HIGH QUALITY

UNIFORM B.T.U. CONTENT

MAXIMUM PURITY

Anchor is continuing to expand its production, manufacturing and shipping facilities as fast as present conditions permit.

ANCHOR

PETROLEUM COMPANY

TULSA 3, OKLAHOMA

BUTANE-PROPANE *News*

Reg. U.S. Pat. Off.

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GAS
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Today's Universal L-P Gas Range is outstanding in looks, performance and satisfaction. That's because Cribben & Sexton have specialized in L-P engineering and designing.

This means that with L-P gas, the dependable fuel, and Universal, the dependable L-P Gas Range, you have a great deal to be thankful for in expanding sales and ever-increasing profits!

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The Preferred Cooking Fuel

L-P UNIVERSAL
The Preferred Gas Range

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TANKS BY *Pacific*

From an industry that has "come of age" a discriminating public demands finer, more attractive products. The Butane-Propane Industry has reached that point and must be alert to these requirements.

Pacific Tanks are designed to meet the most severe demands for quality, attractiveness and utility. They are pleasing in appearance, easy to transport and install, built for many years of satisfactory service. Progressive dealers who care, specify Tanks by Pacific.

Pacific Tanks come in 25, 50 and 100 gal. sizes. All are built under API-ASME, for 250 lb. w.p., or ASME, for 200 lb. w.p. The 100 gal. tank weighs only 300 lbs., 25 gal., 86 lbs. All have fully automatic welds; no longitudinal seams. Valves are fully protected. Only the best materials are used; careful inspection throughout production.

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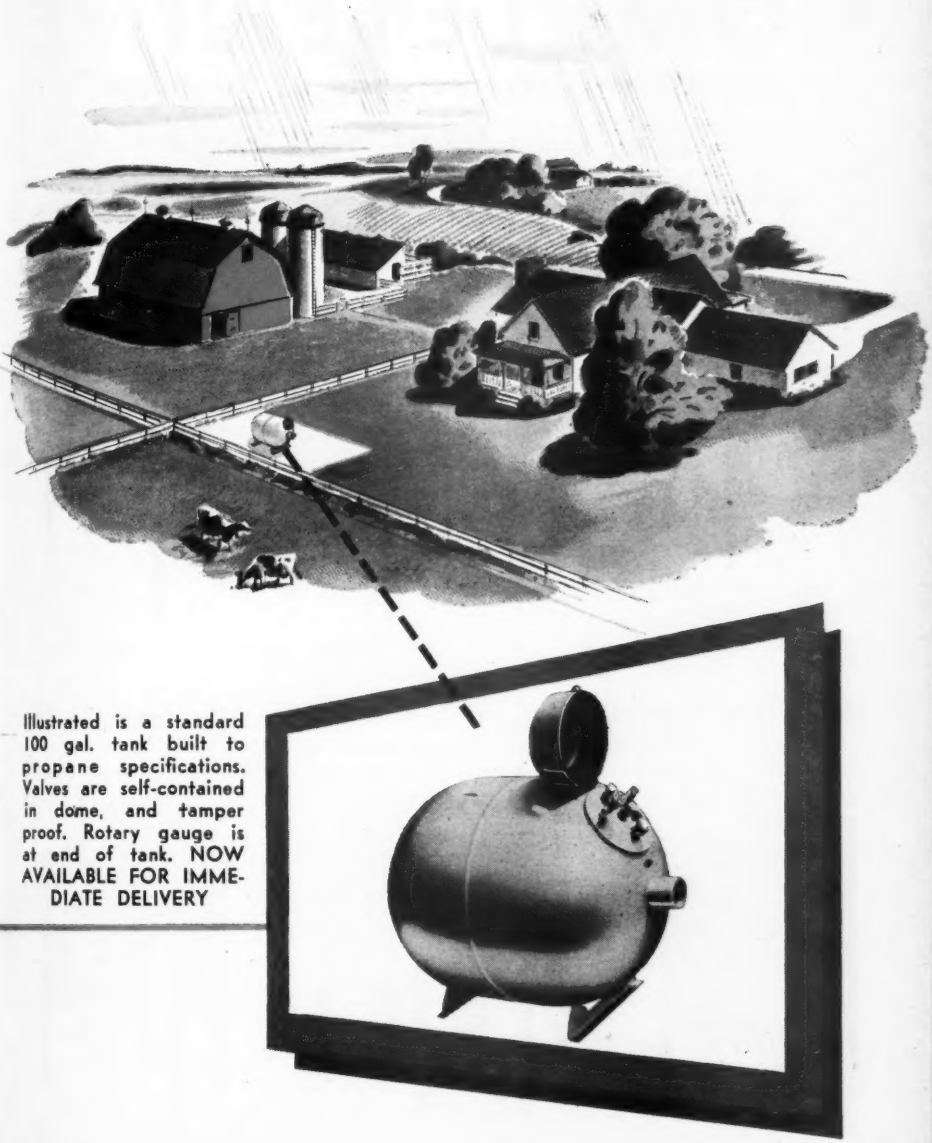

Illustrated is a standard 100 gal. tank built to propane specifications. Valves are self-contained in dome, and tamper proof. Rotary gauge is at end of tank. NOW AVAILABLE FOR IMMEDIATE DELIVERY

Not just a fryer . . . but a

COMPLETE LINE

to suit any size or type of business

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•

RUGGED DURABLE BASKET

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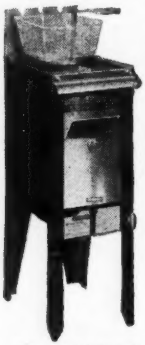
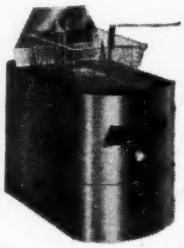
PROMPT DELIVERY

DEEP SEA FRYERS

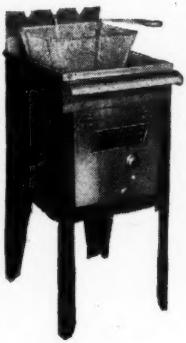
From the Counter Model to the 18" Square Twin, Deep Sea Fryers are designed to turn out perfectly fried foods in volume for all types of establishments.



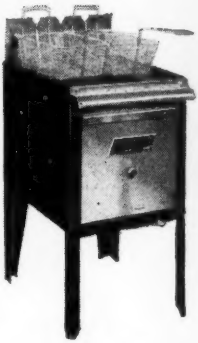
10" x 11" Model



10" x 11" Counter Model



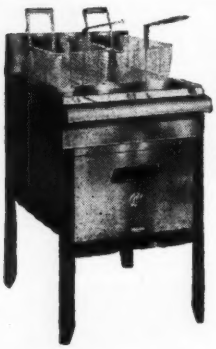
14" Square



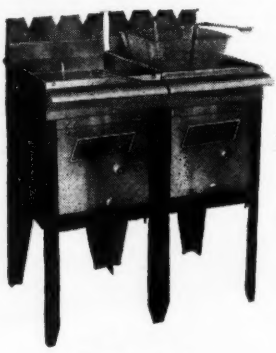
18" Square

SPECIALITIES APPLIANCE CORP. 343-A E. Ohio St., Chicago 11, Ill.

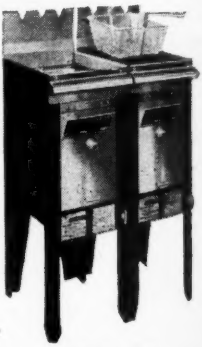
Oldest Exclusive Manufacturer of Fryers



20" x 20" Heavy Duty



14" Square Twin



10" x 11" Twin

LETTERS

Gentlemen:

Naturally, we want to take advantage of what depreciation we can on cylinders for tax purposes, and we are wondering if you have any information as to what limit of depreciation may be taken on propane cylinders.

H.S.

Pennsylvania

The matter of depreciation on LP-Gas cylinders for tax purposes is one to which dealers are giving considerable attention.

Because the industry is not yet old enough for any quantity of cylinders to actually have worn out, there is no sound basis for making an estimate. However, inquiry among companies which have been operating for a long time shows that they are depreciating their cylinders on a 10-year basis. So far there has been no objection to this by the Treasury Department as a result of tax reports.—Ed.

•

Gentlemen:

Would appreciate any information you may have available pertaining to small town copper tubing gas mains using undiluted propane vapor, pressures most commonly used, etc.

A.D.P.

Minnesota

The use of copper pipe for distribution systems is increasing. The operating pressures are determined by many factors in distribution system design, but usually are kept below 10 to 15 pounds per square inch and in many cases low pressure distribution is used when the line pressure is 11" to 12" water column.—Ed.

•

Gentlemen:

We are interested to know the amount of water vapor produced from burning LP-Gas of say 2700 Btu. According to figures given us some years ago, the natural gas used in this area produces approximately .0863 pints of water vapor per cubic foot of gas burned.

Can you tell us the amount of water vapor produced from a cubic foot of LP-Gas using a normal figure? We realize that there is some variation, but we would like to strike an average.

J.W.

California

The amount of water vapor produced from burning LP-Gas of approximately 2700 Btu is approximately .2 of a pint of water vapor for liquefied petroleum gas, or about 2¼ times the amount formed by natural gas.—Ed.

•

Gentlemen:

We would like your advice in regard to the following:

Houses here are low to the ground, many of them 18 inches to 24 inches clearance only. Floor furnaces are sought by home owners.

Among the dealers here there seem to be two schools of thought. One set of butane gas dealers installs floor furnaces under almost any house, relying on a basin shaped pit to provide the necessary clearance. The land is mostly flat and, of course, there is the problem of the pit filling with water.

The other set of dealers insists on enough clearance to permit about six inches clearance under the furnace.

Will you please advise which is the correct practice?

The dealers who insist on the high clearance give the following reasons for their attitude:

"Should a leak occur, heavy butane would concentrate in the pit, perhaps ignite and cause explosion."

The other dealers reply that most

any leak would cause explosion if the leak were of sufficient size and that it would make little difference if the leak were in a floor furnace line under the house or in a stove line in the house.

Some dealers will not install a floor furnace in a cellar nor will they install a hot water heater in a cellar, nor will they install a gas burner in a central heating plant in a cellar. Other dealers will.

The natural gas utility installs floor furnaces on natural gas in houses with almost no clearance, except enough for the installation man to get under the house. They also install central heating plants in cellars and water heaters in cellars.

This is very confusing to the average customer to have such a difference of opinion and practice among the various dealers.

E.M.G.

Alabama

Allowing 6" of clearance is the best practice. In many places where it is impossible to get this clearence it is advisable to provide for ventilation to a point outside the foundations. This has the handicap of being a low spot to accumulate water and gas in case of a bad leak.

It is not good practice to install water heaters or furnaces operating on LP-Gas in cellars unless the cellar is ventilated. A building on a side hill where a bottom vent near the floor can be installed is a good installation.

Natural gas is lighter than air, so any failure of the automatic shut-off will not cause a material hazard as the gas will go up the flue and be dissipated.—Ed.

•

Gentlemen:

Can you give us the name of any manufacturer who makes lights systems or lamps to be used with propane gas?

F.A.M.

Minnesota

The General Gas Light Co., Kalamazoo, Mich., manufactures lamps and light systems for use with propane gas.—Ed.

Gentlemen:

I would like to know if you know of any good correspondence course, or college, that is offering a good short term course in the application and uses of butane and propane gas.

P.M.

Missouri

We are pleased to give you the name of the National LP-Gas Institute, P. O. Box 2422, Tulsa, Okla., which has been conducting for some time a very successful short course and which has recently added a correspondence course covering the above named subject.—Ed.

•

Gentlemen:

We are in need of some information which gives a comparison of liquid petroleum gases with respect to other fuels as to relative cost and heating values.

P.J.B.

California

You will find in our "Bottled Gas Manual" the exact information you seek covering the comparison of liquefied petroleum gas with other fuels in regard to costs and heating values.

You will also find a great deal of similar information in our "Handbook Butane-Propane Gases."—Ed.

•

Gentlemen:

In your July issue there are some articles that cause some confusion to me.

I note in your "Letters" column you have a communication from "W. S. B." asking for a comparative price on bottled gas at $6.25 a cylinder and street gas at 45c per 1000 cubic feet.

In your reply, assuming that the cylinders used were 100 lb. capacity you say that the cost of heating would be three and one-half times that of street gas at 45c per 1000 cubic feet.

Assuming that the weight of butane is 5 pounds to the gallon, as most people say, a 100-pound cylin-

der would hold 20 gallons of butane.

How do you translate the gallons (or pounds) into cubic feet of vapor? I have asked this question of several who are supposed to know and get a different answer each time.

Isn't the price quoted, $6.25, a rather high price for butane? It seems so to us here in the oil country.

Another thing: I do not understand the statement that some gas companies are using propane to add to their peak load capacity.

As we understand the LP-Gases here it is necessary to change over every stove or other appliance when going from street gas to LP-Gas. Do they change these every day? What about their service lines? Can they use the same lines or will their old ones stand the added pressure due to propane?

Then again, if LP-Gases are as high in places like Boston, which is a port city and also not too far from some of the large eastern refineries, with street gas as cheap as he says, how can the utility companies, whose rates are fixed, afford to use LP-Gases?

K.S.

Texas

There are 36.45 cubic feet in a gallon of propane and 31.79 cubic feet in a gallon of butane. Mixtures of propane and butane will give a product which will have a gaseous equivalent between these ranges. Refer to the Handbook BUTANE-PROPANE GASES, Page 22.

A 100-pound cylinder will hold approximately 22 gallons of butane.

Bottled gas is sold by the pound in many sections of the country, with prices as high as 14c per pound.

The gas companies use LP-Gas for standby and enrichment, but do not serve the straight vapors into the system. They are blended with air to make a gas that will burn in the same burners as the gas they are serving. There are various methods of utilizing LP-Gas in manufactured gas works to increase their capacity, but the gas served requires no change in appliances.

LP-Gas used for standby and enrichment is handled in bulk form and the price is determined by the oil country price plus the freight and storage charge.—Ed.

•

Gentlemen:

In the October edition of BUTANE-PROPANE NEWS under "Letters" you had an article regarding moisture accumulating in the regulator. The information you gave was very helpful, but you did not go far enough. You advised adding alcohol to or into the cylinder.

The information I seek is just how much alcohol to add to each cylinder and what method is employed in getting the alcohol into the cylinder.

M.S.

New York

According to our "Handbook Butane-Propane Gases," Page 131, one pint of alcohol should be used with every 100 gallons of fuel.

The method of injecting the alcohol is by means of a manifold block device with POL connections. The alcohol is put into the POL connection, sealed off and then the valve to the tank is opened and the alcohol drops in.

•

Gentlemen:

Will you kindly send me the name and address of manufacturers of butane-propane refrigerators (other than Servel), home deep freeze units and large walk-in deep freeze.

G.R.

Wyoming

As far as we know there are no manufacturers, other than Servel, of liquefied petroleum gas refrigerators and neither do we know of any gas deep freeze units or walk-in deep freezers.

It seems that the engineers have not yet perfected any device suitable for this use of butane or propane.—Ed.

•

• **BUTANE-PROPANE *News* welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed.—Editor.**

It's Here!

The Range

Flavor-Saver Dual Burners and Valves Specially Engineered for L. P. Gas

Fluorescent Light Set with Automatic Timer and Convenience Outlets

Patented Soft-Action Oven Door Spring

Hold-Heat Oven Seal

Easiest Range in America to Keep Clean

Veri-Clean Completely Removable Broiler

One-Piece Porcelain Front Frame Construction

Seamless, Sealed-in, One-piece, Flanged, Porcelain Oven

Your L. P. Gas Customers Have Always Wanted

Built into the new L. P. Gas *Ultramatic* Caloric are *all* the features women want to make cooking so easy it's virtually automatic. It's this combination of selling features, plus consistent large scale national advertising in the leading women's magazines and farm publications that makes the L. P. Gas *Ultramatic* Caloric the feature range in leading stores from Maine to California. There will be no easier range to sell, no finer range to own. They'll be coming off the production line soon.

If you sell fine ranges, write for the Caloric story.

Caloric Stove Corporation, Widener Building, Philadelphia 7, Penna.

20,000,000 Women are Reading About the L. P. Gas *Ultramatic* Caloric in

SUCCESSFUL FARMING
RURAL NEW YORKER
PROGRESSIVE FARMER
PATHFINDER
PACIFIC RURAL PRESS AND CALIFORNIA FARMER
LADIES' HOME JOURNAL
WOMAN'S HOME COMPANION
GOOD HOUSEKEEPING
NEW ENGLAND HOMESTEAD
PACIFIC NORTHWEST FARM TRIO
PENNSYLVANIA FARMER
FARM AND RANCH
McCALL'S
AMERICAN HOME
BETTER HOMES AND GARDENS

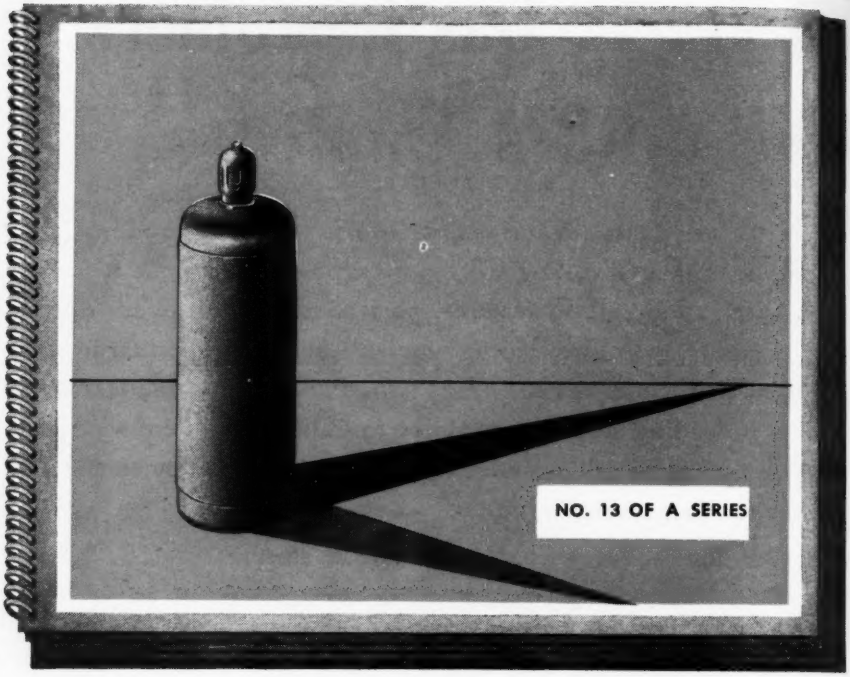
This advertising is backed up by a complete Dealer Merchandising and Promotional Program

Caloric

REG. U. S. PAT. OFF.

GAS RANGES

SERVING HOMEMAKERS SINCE 1890



Testing Trageser Tanks and Cylinders

One reason Trageser products give such remarkable service is the persistent, rigid testing and inspection they get before they are shipped to you. Inspection and testing start with the receipt of raw material and continue through every step of fabrication.

Testing Trageser Tanks and Cylinders is more than a phrase; it's insurance for the protection of your business. *Write, phone or wire for prices.* Telephone EVergreen 8-7700. *Trageser Copper Works, Inc. 5000 Grand Avenue, Maspeth, L. I., New York.*

Among Trageser Advantages

Most modern L-P Gas Cylinder plant in the the country... 96 years of making high quality pressure vessels . . . Trageser-tested more rigidly than ICC demands... no excess weight but ample for strength to resist handling... all markings deep, clear, and free from hammer dents... original Trageser design plug-welds wearing-ring to cylinder for strength, rather than tack-welding for economy . . .

JM1.co T-M1

TANKS by TRAGESER

IT'S THE FIRM THAT MAKES THE CYLINDER THAT MAKES THE DIFFERENCE

COMMENT

THIS has been a busy convention year, with eager hundreds clamoring for a view of new products. Heavy attendance has been the rule for state and national meetings, and first-class programs were arranged.

But if you couldn't go, you haven't lost out altogether. Many of the papers are being printed in this and other issues of BUTANE-PROPANE *News*, and every one is worth careful reading.

•

Industry men who take the time and make the effort to prepare papers for convention groups deserve the thanks of every dealer. It is no easy matter to write a speech, nor to travel even thousands of miles, sometimes, to deliver it.

•

This year's papers have been unusually informative and important, dealing with vital, current problems, and giving men in the field the kinds of technical and sales information that they could get in no other way.

•

Well, they couldn't make it—that consolidation of the two industry associations. They talked it over in Chicago last month and agreed not to agree.

•

The latest Federal Power Commission report shows a decline in the average monthly charge for typical residential electric service in cities of 2500 population, or larger.

Losing the load to gas, undoubtedly. We'll bet the showing would be still worse in rural districts where the butane-propane boys are working their territories.

Smart B-P gas dealers can just walk away with the domestic cooking, water heating, refrigeration and space heating loads when they bear down.

And they must be bearing down, to judge from the tremendous expansion reported from all corners of the USA.

•

What this industry needs is a nationwide adherence to NBFU rules; a state-by-state agreement on tank codes; one general industry association; fewer conventions; larger customer storage, and a better balanced load.

•

There's just one way to be safe—never take a chance. Always be sure!

•

The Technical and Standards committee of the LPGA has announced a meeting for Dec. 2 in Chicago to discuss direct fired vaporizers and housings, direct fired storage tank heaters, the quinquennial retesting of ICC 4-B cylinders, and the installation of LP-Gas in trailers.

This kind of work by the Technical and Standards committee is invaluable to the industry. Its findings in the past have been wise and have had far-reaching influence upon code-making bodies.

•

By Ed.

Eliminating Dealer's Headaches

THE IMPROVED *ALGAS* *Vaporator*

CHECK THESE COLD WEATHER FEATURES

- Models available with capacities from 13 gallons to 52 gallons per hour LPG.
- New, improved burner of larger capacity which will not backfire.
- Installation above or below ground with tanks of any size.
- Stainless steel non-stick, non-freeze control valve.
- Sensitive automatic valve control which cuts burner off or on . . . maintains constant sphere pressure within one-pound range.
- Molded valve seats.
- Entirely Automatic.

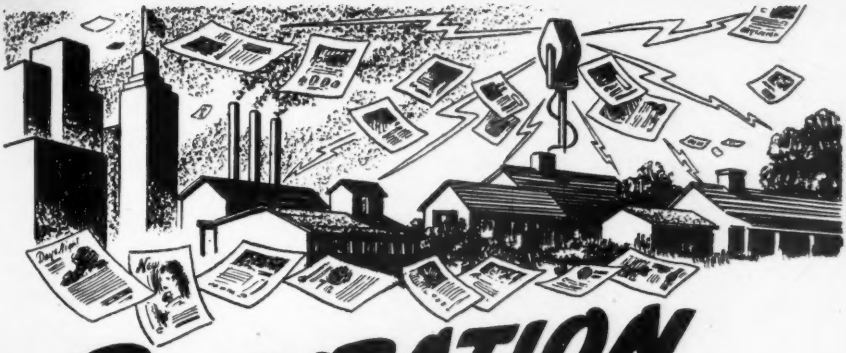
For details write for Bulletin V-1

1109 S. Santa Fe Avenue
Los Angeles 21, California

Model 1300
Make installations before cold weather sets in. Place orders now for prompt delivery.

ALGAS

AMERICAN LIQUID GAS CORPORATION
LOS ANGELES CHICAGO



SATURATION ADVERTISING

KEEPS USERS AND POTENTIAL BUYERS "SOLD" ON DAY & NIGHT

The many present users of DAY & NIGHT water and space heating equipment in the LPG field—as well as POTENTIAL users—are kept constantly sold on DAY & NIGHT features and advantages through

Radio . . . magazine . . . and trade journal advertising . . . Direct mailings . . . Dealer Displays and other point-of-sale material.

DAY & NIGHT dealers benefit from this saturation advertising. They find ready acceptance for DAY & NIGHT appliances; their prospects are pre-sold. DAY & NIGHT products are sold through wholesale plumbing supply jobbers in most territories. For the name of your nearest DAY & NIGHT jobber write us direct.

DAY & NIGHT

Water Heaters
Wall Heaters
Panelrays
Cabinet Heaters
Portable Heaters

Gas Cabinet Heaters

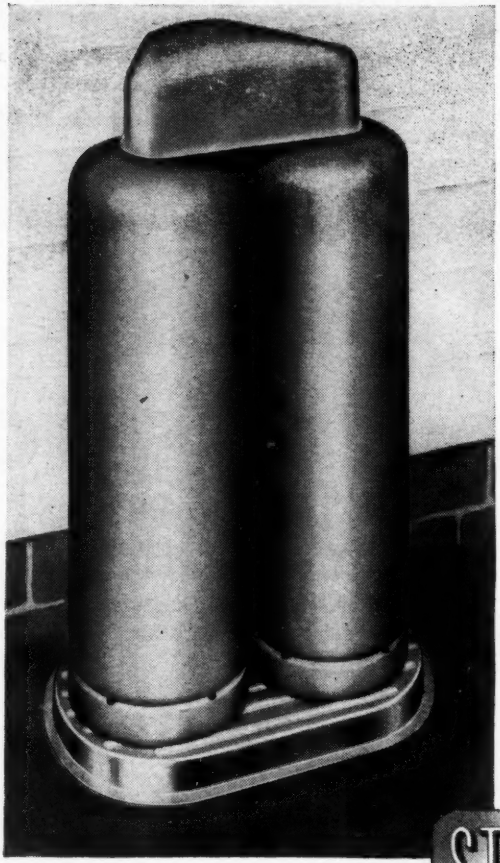
Combine radiating and circulating heat. Conveniently portable; efficient and economical heaters. A.G.A. approved for LPG operation.

AMERICA'S FINEST WATER HEATER

DAY & NIGHT MANUFACTURING CO.

MONROVIA · CALIFORNIA

One of the Dresser Industries

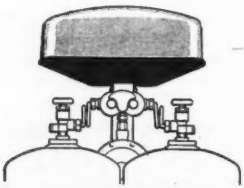


THE NEW D-1

WINS

THE STAMP OF APPROVAL FOR

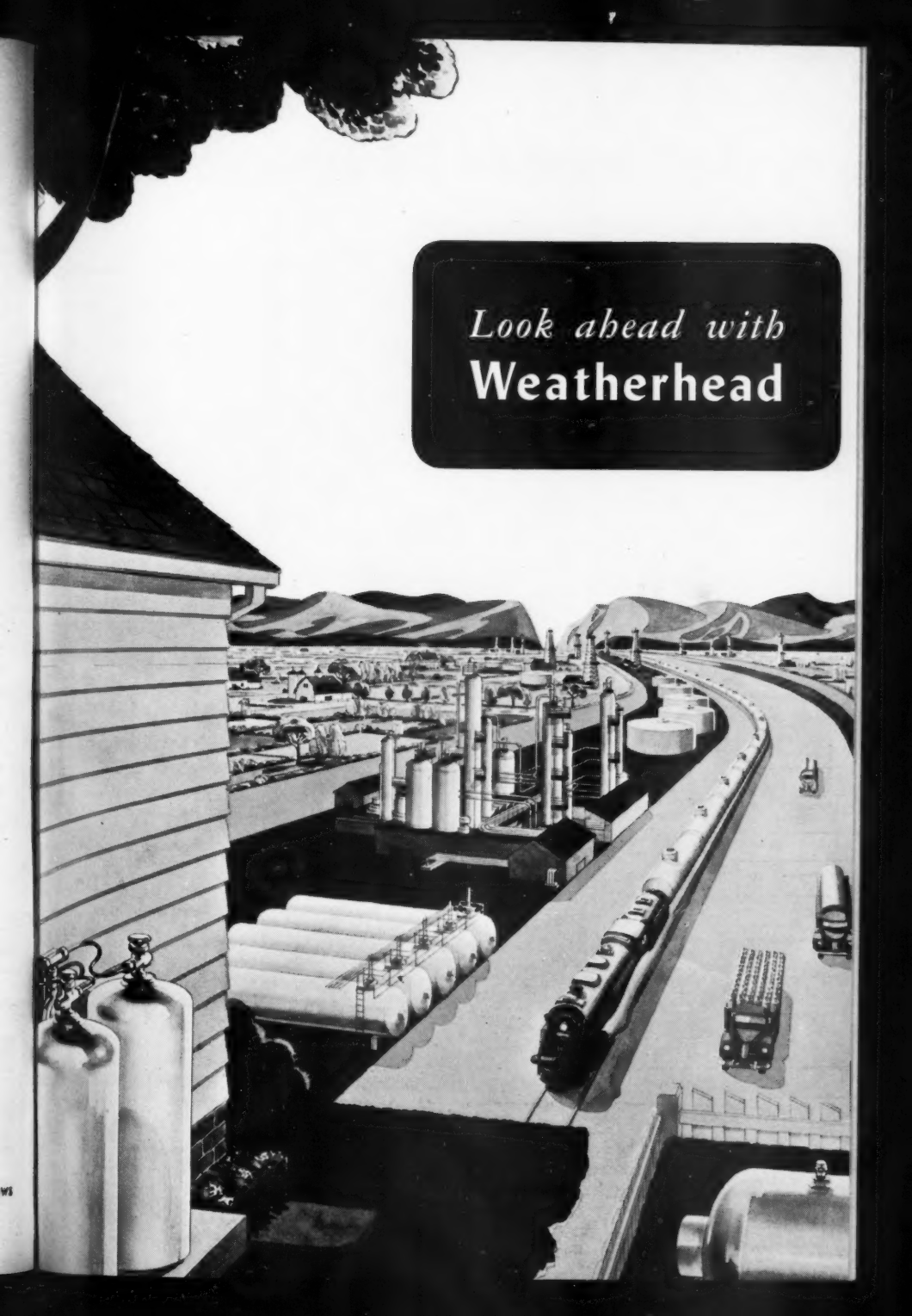
STAMPINGS INCORPORATED



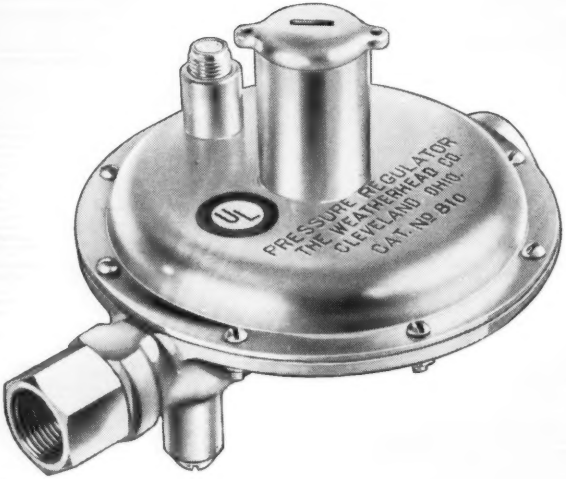
New type Slip Hinge on the D-1

We are indeed happy over the acceptance accorded our new D-1 Housing at the recent trade exhibit in Chicago. Our entire organization extends thanks to the hundreds who visited our display and for the many orders they gave us. You may obtain literature on the new D-1 by writing to Stampings, Inc., Davenport, Iowa.

STAMPINGS, INC, DAVENPORT, IOWA


Look ahead with
Weatherhead

Weatherhead No. 810 Regulator



This regulator reduces the widely varying cylinder or tank pressures to a uniform delivery pressure. It is recommended for L. P. G. loads up to 200 cubic feet per hour.

Weatherhead offers this regulator with either of 2 inlet orifices and settings as follows:

Type 1 or "PROPANE" setting has a 1/8" inlet orifice and is set at an 11-inch delivery pressure and 1-p.s.i. inlet pressure at a flow of 30 cubic feet of propane per hour. Type 1 is recommended for single-stage propane service.

Type 2 or "BUTANE" setting has a 3/16" inlet orifice and is set at an 11-inch delivery pressure and 1-p.s.i. inlet pressure at a flow of 25 cubic feet of butane per hour. Type 2 is recommended for either butane service or for second-stage propane; e.g., type 2 should be used in conjunction with an automatic manifold.

When ordering, specify whether regulator is to be used on type 1 or type 2 service. The type service can be determined in the field by the size inlet orifice stamped on the inlet nipple.

Delivery pressure setting is easily changed by removing seal cap and turning adjusting screw "in" to increase the delivery pressure or "out" to decrease the delivery pressure.

Weatherhead LP-Gas Equipment is designed for handling liquefied petroleum gases in accordance with requirements of the National Board of Fire Underwriter's, Bureau of Explosives and Interstate Commerce Commission. Weatherhead LP-Gas items are acceptable for use with LP-Gas systems listed by the Underwriter's Laboratories.

Weatherhead Products Include: Fittings, Hose Assemblies, Valves, Cylinders, Dash Controls, Dehydrators, Drain Cocks, Packing Regulators, Strainers.

Weatherhead Automatic Control Manifold No. 813

The automatic manifold provides a convenient and practical method of supplying uninterrupted gas service to appliances. It automatically cuts in a reserve cylinder when the supply or service cylinder becomes empty. It is becoming increasingly popular for connecting two cylinders or two banks of cylinders to the inlet of a "standard" Weatherhead regulator, particularly where one or more of the appliances are "automatic".

The unit consists of two regulators and a small indicator gauge. The outlets of the two regulators are joined, each being set at approximately six pounds delivery pressure. Turning the handwheel increases the delivery pressure of the regulator on the service side of the system to twelve pounds, leaving the reserve side at its original six pound setting. Thus, in operation, as long as the pressure in the service cylinder is above six pounds, the reserve regulator cannot open and gas is supplied only by the service cylinder. When this service cylinder is empty, and as a result its regulator delivery pressure falls to six pounds, the reserve cylinder cuts in and supplies gas for the appliances. A "standard" Weatherhead L. P. G. low pressure regulator is directly connected to the male POL outlet of the automatic manifold to further reduce the delivery pressure to the six ounces required at the appliances.

The indicator gauge is connected to the combined outlets of the two small regulators in the manifold and shows the delivery pressure of the automatic manifold. This indicator gauge shows "green" as long as the service cylinder is supplying gas. When the supply cylinder becomes empty and pressure falls, the reserve cylinder automatically cuts in. The gauge then shows "Red". The indicator can be seen from inside the house.

Write for your copy of the new 52 page Weatherhead LP-Gas Catalog. It illustrates and describes every Weatherhead product for the LP-Gas Industry. Includes cross section illustrations of parts and detailed specifications. Tells how to install and replace parts.

Weatherhead L·P Gas Equipment

FOR TANK SERVICE

FOR BOTTLE SERVICE

SERVICE LINE VALVE NO. 101

Especially designed for use on A.S.M.E. and A.P.I.-A.S.M.E. containers. Also excellent on I.C.C. containers which are provided with a separate safety relief.

SAFETY RELIEF VALVE NO. 300

The start of discharge pressure is stamped on each relief valve. The suffix letter, which is part of the catalog number indicates its pressure classification. Thus the correct valve can be selected for a particular container to meet N.B.F.U. Pamphlet No. 58 requirements. Adapter available but must be ordered separately.

QUICK FILLER VALVE NO. 401

Provides quick connection between tank and filler hose. Has a double back pressure check valve. Each check is equipped with its individual spring for positive closing, making it easy to remove the top half of the body and examine the resilient seat.

VAPOR EQUALIZING VALVE NO. 501

Combines a back pressure check and a spring type excess flow. Permits removal or examination of resilient seat without emptying tank. The hose coupling holds back pressure valve open to permit flow in either direction.

EXPANSION COILS NO. 700

This expansion coil provides a flexible connection and should be used between the regulator and the house line where the house line is rigid pipe.

CYLINDER VALVES NO. 100

Combines in one unit a safety relief and shut-off valve. The large seat opening provides faster fillings. Equipped with a back seat so that the bonnet can be removed and the diaphragms changed while the valve is under pressure.

TEE MANIFOLD NO. 1100

Designed for connecting two cylinders to the inlet of the regulator. Disc check permits replacing an empty cylinder without interrupting the gas service from the other cylinder.

COPPER PIGTAIL ASSEMBLIES

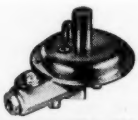
All Weatherhead pigtails are made of $\frac{5}{16}$" or $\frac{3}{8}$" O.D. seamless copper tubing having a wall thickness of .049. All but No. 719 carry a male POL connector *on each end.*

MANUAL THROWOVER MANIFOLD NO. 1103

This three-way valve is an excellent manifold for connecting two cylinders or two banks of cylinders to a regulator. Turning handle opens the line from the cylinder toward which the handle points and in the same operation closes the other side of the system.

MULTIPLE HEAD NO. 900

Designed for use on a two standpipe system either above or below ground. One pipe is used to connect this head, the other for the fill valve. This fill pipe can be extended to the bottom of the tank, and by means of the unloading adapter No. 302, the contents of the tank can be removed when necessary.



803 REGULATORS FOR TANK AND BOTTLE SERVICE

Designed to handle large loads, reducing the widely varying tank or cylinder pressure to a uniform delivery pressure. Type 1 or "PROPANE". Type 2 or "BUTANE". When ordering, specify whether regulator is to be used on type 1 or type 2 service.

AUTOMATIC CONTROL MANIFOLD NO. 813

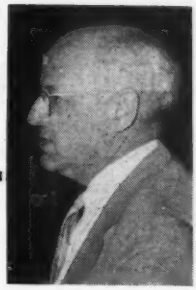
This manifold automatically supplies fuel from the reserve cylinder after the cylinder on the service side of the system is exhausted or if the pressure drops too low because of heavy load demand.

THE WEATHERHEAD COMPANY

CLEVELAND 8, OHIO

NEW YORK • DETROIT • CHICAGO • ST. LOUIS • ATLANTA • DALLAS • LOS ANGELES

Beyond the Mains



By ELLIOTT TAYLOR

Steel for Cylinders

The terrific needling that the cylinder manufacturers are taking from the propane industry in its endeavor to get some of the containers necessary to take care of new expansion is in our opinion as unfair as it is doomed to be unproductive of results.

Propane cylinders are not being shipped for the simple reason that the cylinder makers are unable to obtain steel in anything even approximating the quantities required for them to maintain normal output.

As a strictly horseback estimate we would say that the principle manufacturers of cylinders have a combined capacity of between 1¼ and 1½ million, 100-pound, propane cylinders per year. According to all present indications the actual output for 1946 will run under 300 thousand, or less than 25% of the total capacity.

The reasons for this are numerous, and which one is the most important is subject to anybody's interpretation. According to a survey made in October by the "United States News," the coal and steel strikes are responsible for a 1946 deficit in steel output of 13 million tons. This deficit represents the difference between the total national demand for 82 million tons and the estimated output for the year of 69 million tons.

Responsibility for the distribution of the inadequate steel supply rests with the Civilian Production Administration in Washington, and so far the CPA has not recognized the LP-Gas industry as essential in the allocation of steel for cylinders. It is the opinion of those who are close to the picture that unless the CPA can be impressed with the urgency of the need for a specific allotment of steel for LP-Gas containers, the shortage in this type of equipment will not be materially relieved before 1948.

If this shortage persists, as now appears gravely possible, the inroads of the electrical industry on the potential expansion of propane, particularly in the Middlewest and East, will do

irreparable damage to the future of the industry. Electric range production has been steadily mounting during 1946, until in July, the last month for which U. S. Department of Commerce figures were available, the output was of 54,456 or more than double that for February of this year. And as has been repeatedly pointed out, the electrical industry is concentrating on the small town and rural market for its major domestic load building activity.

Many of the so-called new gas prospects are in reality prospects for either gas or electric cooking, and will take whichever gets to them first with the equipment and the appliances that they want.

While CPA will not concern itself with the competitive aspects of gas versus electricity, it may be influenced to a degree by enough protests and demands from the rank and file of the industry, if those demands set forth the need for gas cylinders in terms of veterans' housing requirements, local farm needs, and the continued supply of fuel to existing gas users.

Letters on the subject should be addressed to: C. A. Lewis, Container Division, Civilian Production Administration, Washington, 25, D. C.

Personal Peeves

It is not at all in keeping with the tranquil dignity with which we have always hoped to invest our declining years for us to become involved in verbal brawls with those who disagree with our more or less flexible editorial viewpoint. All that we ask is that our critics quote us accurately, if they quote us at all, and that they spell our name correctly.

Thus when Howard D. White, head of the Chicago wing of the Liquefied Petroleum Gas Association isues a bulletin, Informational C-20, October 3, 1946, and refers to our editorial feature as "Off the Mains," misspells our name, distorts a statement that we made regarding the LPGA insigne and then wanders off in a rhapsody of innuendo on the comparative values of "30 square inches of page space at, say $200" as against a $75 booth at one of the industry's innumerable conventions, we are moved to remind Mr. White that accuracy can be a virtue in professional association activities as well as in the humbler calling of trade journalism.

"Mr. Taylor Tells Part of the Story" is the caption of the October informational from Mr. White's pen, and in that he is correct. We have told only part of the story about the sorry state of affairs in which liquefied gas association endeavor finds itself. And one reason why we have told only part of the story is that we have felt that things would sooner or later work them-

selves around to the place where there would be one national organization in the field that would be truly representative of the entire industry.

We have conceived this as being attainable only through one strong intelligently conceived association, democratically operated, with the cost of its service being borne in proportion to the ability to pay and with a tangible program to make membership worth while to everyone with an interest in any phase of liquefied gas operation.

The part of the story that we haven't told, is that the reason this unity has never been brought about is that every attempt to unite all interests in one strong and representative organization has fallen down before the barrier of somebody with a job to protect and with strong friends in the industry to help him defend it.

During the National Butane-Propane Association meeting in Chicago a weak attempt was made to have this organization and the Liquefied Petroleum Gas Association get together on a tentative plan looking forward to a merger of the two groups. The real reason the plan fell through was that each side approached the meeting with an attitude of compromise on almost every point but one—neither would have the top hired man from the other group to head up the amalgamation.

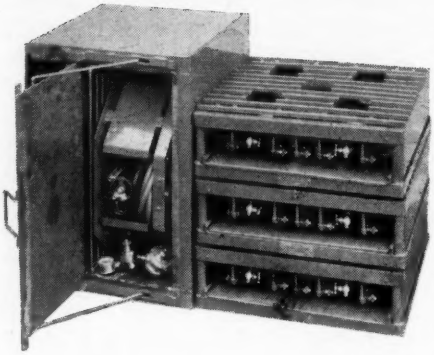
There are state gas associations well organized and going strong who are disposed to affiliate with some national group. But it is only natural to assume that they are waiting to see which one, or whether either one, of the two now in the field is going to emerge as the true national association of the industry.

That is still only "part of the story" no doubt, but it ought to be enough to indicate that the job of organizing the LP-Gas industry is one that should no longer be loused up by considerations of the feelings, or the fortunes, of those who are hired to do the organizing job. And it is one that needs the full time and undivided attention of someone who is competent to bring it through to a successful fruition.

Then, as far as kicking editorial writers around for what they may have to say—that never pays off. They are in the main a shameless, superficial, ungrateful, arrogant and opinionated lot, always drinking somebody else's bottle and never returning thanks for the free meals or the reduced registration fees that they sometimes get at conventions. Shooting or horsewhipping them still have some possibilities, but a cultured literary castegation is little more than a waste of time, even when the name is spelled right and the column correctly designated.

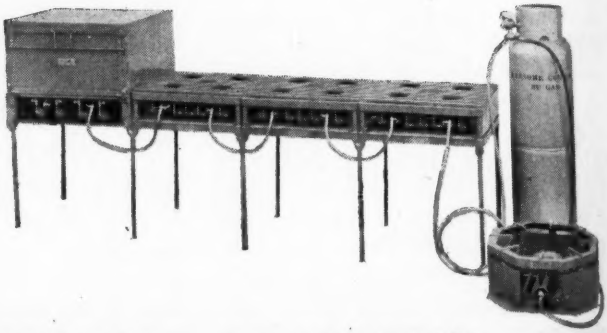
RANSOME FIELD STOVE

FOR TEMPORARY CAMPS · DISASTER RELIEF



Knocked down, the field stove takes up minimum space and is easily transported by truck, plane, horseback or muleback.

Here is a field stove designed to operate on either butane or propane and has found a wide range of applications, especially in the state and federal forestry services, fire fighting and logging camps, construction camps, migratory workers and fruit pickers' camps, as well as disaster relief equipment for the Red Cross. It is highly recommended for its flexibility and mobility. In just a jiffy, it can be set up and ready to go to work. Available in any combination of units.



Each cooking unit has five burners, the large oven a single, large burner, and the hot water heater handles a standard 50-gallon GI can.

RANSOME COMPANY

Designing and Constructing Engineers

4030 HOLLIS STREET • EMERYVILLE, CALIFORNIA

Ransome

Building an LP-Gas Business—

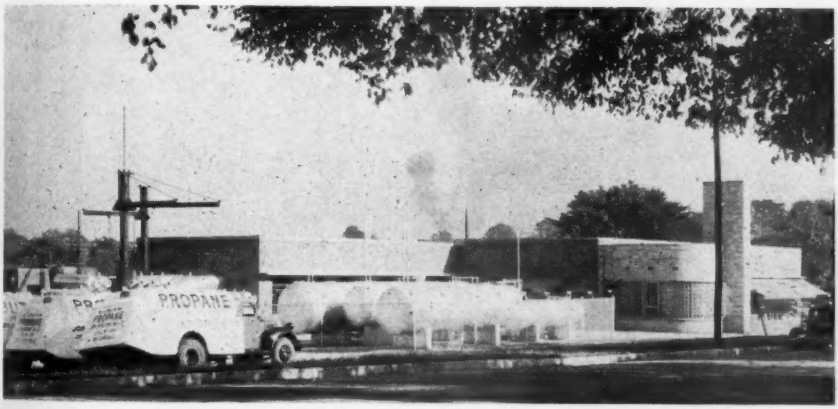
Starting from scratch, the Joplin Butane Gas Co. has worked out its own successful merchandising methods, including larger customer storage.

By O. D. HALL

HIGHWAY 66 travelers passing through Joplin, Mo., are favorably impressed by the modern plant of the Joplin Butane Gas Co. at Main and B Streets.

All buildings, storage tanks and even the protective wire mesh fence gleam with snowy white paint. Everything about the premises bespeaks a desire to please and serve the public which has moved the firm into the top rank of liquefied petroleum gas service institutions of the Southwest within six years of steady progress.

Starting in humble surroundings in July, 1940, with a 5000-gal. butane storage tank and an 1800-gal. storage container for propane, both purchased from the Columbian Steel Tank Co., of Kansas City, Mo.; one 1000-gal. tank truck and a small filling station as an office, the company has expanded to a storage capacity of approximately 100,000 gallons of B-P Gas. It also has a sizeable fleet of delivery and service trucks and a group of substantial headquarters buildings.



Another view of Joplin Butane Gas Co., general headquarters building, including offices and showroom at right; shops, shipping and store rooms, at left. Part of the company's delivery truck fleet, storage plant and individual systems appear in center and left foreground.

Operations of a Busy Dealer

▲

Gayle Childress, secretary - treasurer, in the workshop.

▼

Well equipped bottling room of Joplin Butane Gas Company.

The Joplin Butane Gas Co. is but one of many concerns that has made a pronounced success in the LP-Gas business. But, like others, it had to struggle, and the story of its slow, difficult progress will be published next month. Monte Taylor told all about it at the Oklahoma City convention in September, and many a young dealer will derive courage from the experiences of this company.—Editor.

Buildings include a 25x58 ft. showroom on the highway; a 50x62 ft. warehouse, a 30x35 ft. paint and work room, a 30x33 ft. bottling plant, a shop 15x25ft., and an 8x20 ft. shower room for employes.

On the same lots are six attractively painted B-P Gas storage tanks, a modern pump and unloading plant, all protected by a strong wire fence, with plenty of parking room for tank service and bottle delivery trucks; also, ample storage space for home systems and other necessary equipment. Although the plant gives an appearance of compactness, there is plenty of room for company employes and customers.

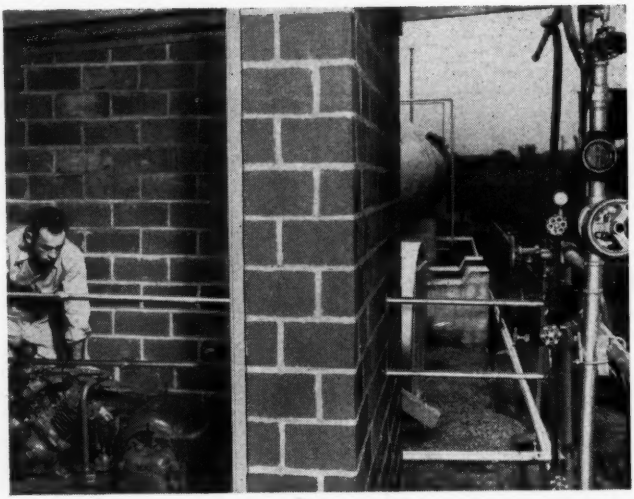
In addition to the storage tanks first installed, other bulk containers for butane and propane include B-P Gas tanks of 7500 gals.; one 16,000 and two 30,000 gallon capacity each furnished by Hammler Boiler Co., Chicago, Butler Manufacturing Co., of Kansas City, and Southern Gas and Equipment Co., of Houston, Texas.

Suppliers of individual and commercial tank systems include Black, Sivalls and Bryson, Oklahoma City, the Butler and the Southern Gas & Equipment firms.

Monte Taylor, vice president and manager, pointed out that as a special safety feature double valves for testing and service purposes are placed on every loading and unloading connection. Each line is equipped with two valves supplied by Bastian-Blessing Co. of Chicago and Orbit Oil Wells Supply Co., Tulsa. A 1-inch Hewitt hose

G. L. Childress, president, Joplin Butane Gas Co., at his desk in company office building.*

*** One of several photographs shown in this article taken by Ray Jacoby and furnished by courtesy of Black, Sivalls and Bryson, Oklahoma City.**



Equipment for unloading railroad tank cars, including Brunner compressor unit, being examined by Gayle Childress at left.

Approximately 100,000 gallons storage capacity for B-P Gas is shown in this picture. Note the protecting wire mesh fence and neat appearance of storage plant. Railroad trackage available to plant shown in right background.

and 2-inch piping are utilized in such lines.

Unloading of 10,000-gal. tank cars is facilitated by a Brunner Manufacturing Co. Compressor unit, which includes a 6-hp., explosion-proof, electric motor. Viking Pump Co. pumps are installed at the storage and bottling plants.

Supplementing a fleet of 1470-gal. twin delivery tank trucks, some 1870-gal., Butler, twin tank trucks are being tried out on delivery routes. The firm also keeps two installation trucks busy on its routes with from two to three men on each truck. Two wheel trailers, equipped with hand winches, are designed to straddle the hole for placement of underground tanks. Bottle service trucks carry tools in a compartment on one side and a compartment for cylinders on the other. On the delivery trucks the meter pump is mounted on the driver's side close to the power take-off.

The company is encouraging the equipping of trucks and farm machinery with B-P Gas power units and it is the distributing agent in Joplin for Ensign carburetors.

B-P Gas is shipped in tank cars from the Sinclair Prairie Oil Co. refinery and Seminole, Okla., to sidings adjoining the unloading plant of the Joplin company in Joplin.

Florida Firm Given Charter

A Florida state charter has been issued to the Propane-Butane Equipment Co., of Miami.

The incorporators are R. B. Cole, Leila S. Thornton and Estella MacMillan.

AGA's October Convention Draws Record Attendance

With the largest crowd in its convention history in attendance, the American Gas Association met in Atlantic City, Oct. 7-11.

During the same week the Gas Appliance Manufacturers Association held an appliance and equipment exhibit that attracted gas industry men from all over the country.

For the first time, members of the liquefied petroleum gas industry were specially invited guests and the North Eastern Section of the LPGA took advantage of the occasion to hold a one-day session. (See Page 47).

New officers of the AGA are:

President—R. H. Hargrove, vice president, United Gas Pipe Line Co., Shreveport, La.

First vice president—Hudson W. Reed, president, The Philadelphia Gas Works Co., Philadelphia.

Second vice president—Robt. W. Hendee, president, Colorado Interstate Gas Co., Colorado Springs.

Treasurer—Ed. F. Barrett, Long Island Lighting Co., Mineola, N. Y.

L. M. Edwards Named President Pacific Coast Gas Association

At the 53rd annual convention of the Pacific Coast Gas Association, held in San Francisco Sept. 10-12, Le Roy M. Edwards was elected president. Mr. Edwards is vice president and general manager of the Pacific Lighting Corp., Los Angeles.

Other new officers of the PCGA are:

Vice president—A. H. Sutton, president, Mission Appliance Corp., Los Angeles.

Treasurer—D. G. Martin, general auditor, Pacific Gas & Electric Co., San Francisco.

Officials Trying to Relieve Tank Car Shortages

RECONVERSION Director John R. Steelman announced Oct. 8 a series of inter-agency action which are being taken to cope with a serious shortage of railroad tank cars used in transporting acids and liquefied petroleum gases.

The War Department, the Civilian Production Administration, the Office of Defense Transportation, and the War Assets Administration jointly developed an emergency program under which the following steps are being taken:

Program Is Outlined

1. The Office of Defense Transportation will locate 525 petroleum tank cars which can be converted into ammonium nitrate solution carriers. About 300 of these cars will be leased to the War Department and the remainder will replace War Department owned cars which will be recalled from industry service.

2. The War Department has cancelled its plans for immediate recall of 400 sulphuric acid tank cars now on lease to industrial concerns. However, about 100 of these cars, now in the ammonium nitrate solution service, and 200 other Army owned chemical carriers, will be withdrawn as quickly as ODT assigns petroleum cars for conversion into ammonium nitrate carriers. The converted cars will have greater carrying capacity than those they replace.

3. The Civilian Production Administration is taking necessary actions to step-up production of high pressure tank cars which are critically short of requirements.

4. The War Assets Administration will refrain from further sales of high-pressure cars normally used in the transportation of anhydrous ammonia, propane, butane and similar chemicals until the present emergency has passed.

5. The Office of Defense Transportation will take such actions as are necessary to increase the efficiency of use of existing high pressure cars by eliminating cross-hauls, speeding turnaround time or other means.

6. The ODT will use its powers to insure that Army-owned high pressure cars which are withdrawn from commercial fertilizer production are replaced by other cars, preferably from new production, but from other sources if necessary.

Trying to Replace LP-Gas Cars

7. ODT also will make special efforts to replace cars withdrawn from the liquefied petroleum gas industries, either for the Army or for commercial fertilizer plants, as rapidly as production of new high pressure cars will permit.

Where necessary, OWMR directives have been issued authorizing the various agencies to carry out the emergency program.

The shortage of high pressure and other chemical tank cars has been accentuated by the reopening of ordnance plants for the production of nitrate fertilizer and by the greatly expanded needs of the liquefied petroleum gas industries.

Chicago Convention Plays to 500 Equipment-Hungry Dealers

SPURRED with the enthusiasm imparted by a new organization, LP-Gas men from all sections of the United States concentrated in Chicago in September to attend the first annual convention of the National Butane-Propane Association.

Most of them arrived at the headquarters hotel—the Continental—on Sunday, Sept. 22. In fact, the convention was well on its way 18 hours before officially opened by President J. Richard Verkamp on the morning of the 23rd.

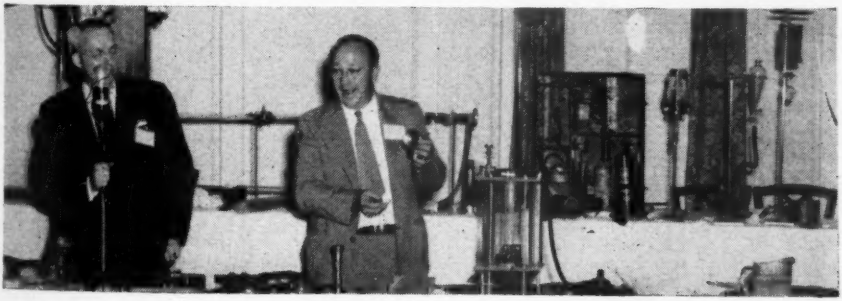
Clamoring for rooms, engaging in board and committee meetings and goodfellowing in the pent houses on the 38th and 39th floors, the vanguard had the jump on those who arrived barely in time to witness equipment exhibitors belatedly—and frantically—unboxing their displays which a wedding on the previous night in the Boulevard Room prevented being on schedule.

NO MERGER

During the NBPA convention in Chicago, Sept. 23-25, committees from the National Butane-Propane Association and the Liquefied Petroleum Gas Association met in joint session to discuss possibilities of consolidating the two groups.

The two committees were unable to effect a satisfactory mutual agreement.

It was estimated that there were more than 500 men at meetings and exhibits, a testimony to the successful organizational efforts in which association officials have been engaged in the comparatively brief period since the group formed at Omaha but a year ago last May. This was additionally emphasized in the later action of the board of directors which unanimously re-elected Mr. Verkamp to serve a



G. M. Kintz and H. F. Browne, safety engineers, U .S. Bureau of Mines, Dallas Office, who gave safety demonstration entitled "Magic of Fire."

J. Richard Verkamp, NBPA president (re-elected for another term); Charles Russell, LPGA president; and E. E. Hadlick, NBPA executive vice president, met in Chicago to discuss consolidation of the two organizations—but it didn't work.

second term as president. (Full list of new officers on page 134.)

However, association officers, committeemen and directors all shared in the credit due for the large attendance and the constructive program, but upon Elwin E. Hadlick, executive vice president, fell the bulk of responsibility, and the praise, for completing arrangements and for the direction of the event. He was ably assisted by Willard A. Moey, convention manager.

The spirit of the convention was wrapped in an easy freedom of attentive but leisurely interest that manifested itself in the well-spaced-out program and extended to the deliberation with which dealers sauntered through the exhibit rooms and lingered over their luncheons. This was due to limiting morning and afternoon sessions to but one or two industry talks or group meetings, and directly resulted in large attendances at them all.

Vigorous addresses on national and world affairs, following the luncheons on all three days—Monday, by Willard E. Goslin; Tuesday, by De Witt Emery, and Wednesday by Clayton Rand—contrasted with the talks on industry problems which were made by selected speakers.

W. T. Joplin, outgoing vice president, as chairman of the first general session, introduced the first industry speaker, C. R. Bailey, National LP-Gas Institute, Tulsa, who discussed "Safety Training Programs," illustrated by lantern slides.

Mr. Bailey said that a good safety program should train those concerned to develop (1) an attitude of disrespect for unsafe tools; (2)

a knowledge of how to judge the condition of equipment; (3) how to care for it, use it safely and to the best advantage, and (4) to respect codes, rules and regulations and encourage their improvement.

The problem of the individual dealer and the national need for developing an industry consciousness to the the entire safety program was declared imperative.

The Wednesday session was under the chairmanship of John M. Robinson, newly elected vice president.

Eric Flaschar, Dresser Industries, Inc., Cleveland, read a paper titled, "Bulk Storage Plants," in which he told of the rapid development of the LP-Gas industry, its expansion potential; the variation in seasonal load and the tendency toward standardized storage facilities (Mr. Flaschar's paper is printed in full, in this issue, beginning on Page 88.)

The "Magic of Fire", a demonstration showing why and how fires and explosions occur, was presented by G. M. Kintz and H. F. Browne, U. S. Bureau of Mines. It was a revelation to the LP-Gas men who witnessed it. Many declared it, alone, was worth the trip to Chicago, and its influence upon the handling of liquid fuels by dealers is certain to be important, for it vividly demonstrated how safe butane and propane are when intelligently handled and how disastrous any fuel can be when basic knowledge regarding it is lacking.

J. M. ROBINSON

V. W. PACKARD

Two of the most important meetings on the program were open discussions on Monday and Tuesday afternoons of (1) problems of state associations and (2) safe practices and public relations.

The first was directed by Harry Torbit, president of the Colorado group which has written industry history in its methods of obtaining favorable legislation for dealers in that state. It was a roundtable exchange of information covering accomplishments by the state associations, with every organization offering out of its particular experiences important facts which could be capitalized upon by the others in their future expansions.

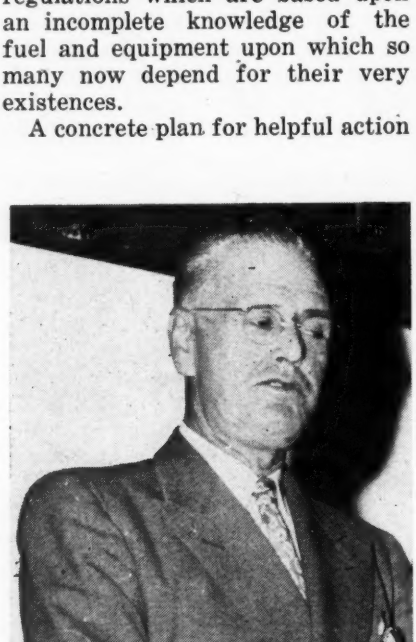
The principal issue, according to those who brought their problems to the meetings, is whether the in-

JOHN LOCKE

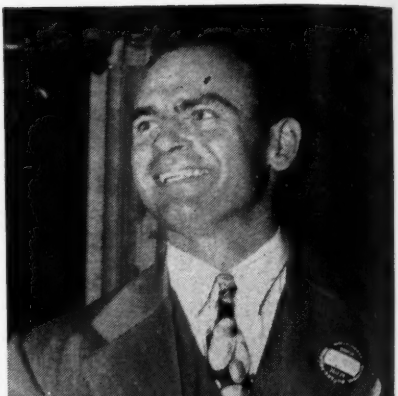
W. A. MOEY

dustry shall anticipate law making bodies by initiating their own protective plans for laws to safeguard the public, or await action by legislatures which may often impose regulations which are based upon an incomplete knowledge of the fuel and equipment upon which so many now depend for their very existences.

A concrete plan for helpful action



W. T. Joplin, Phoenix, outgoing first vice president, presiding at first open session.



Robert E. Zuppke, Minneapolis, chairman of auditing and vote tabulating committee.

was embodied in the decision to have the National Butane-Propane Association act as a clearing house for information for all state associations which wish to avail themselves of such service. Members and non-members everywhere, and especially officers of state associations, are urged to transmit to E. E. Hadlick, executive vice president of the National Butane-Propane Association, information covering any pending or proposed legislation. Such information is expected to afford the association an opportunity to prepare opposition to unfavorable regulations and constructive advice presented to lawmaking bodies so that resulting

contest of industry operations can be intelligently planned and expected.

John L. Locke, Northwestern Blaugas Co., St. Paul, chairmaned the Safe Practices and Public Relations Committee session, which resulted in a recommendation to the board of directors that the association initiate and sponsor an industry-wide safety program and that in such program it enlist the cooperation of distributors, state and regional organizations, dealers, governmental representatives, National Safety Council, underwriters and all others interested; that for that purpose a special committee be appointed and arrangements be made for the services of a qualified engineer consultant to advise with the committee.

The committee plans to prepare a safety booklet for the whole industry with the objective of familiarizing dealers with sound safety practices and acquainting them with existing regulations.

Exhibits Attract Crowds

The ample time allowances provided on the program for dealers to visit exhibit booths of equipment gave the manufacturers an excellent play. There was universal interest in the equipment shown.

The social event of the meeting was the Tuesday night banquet and floor show, both of outstanding merit. Special recognition is due to Vincent Gottschalk who MC'd the entertainment.

And well-earned credit was liberally extended to the registration girls who did their fair share in the smooth-running meeting. Three of them—Gertrude Vogt, Marion Pohl and Helen Horning—were from the NBPA Minneapolis office, while Virginia Marty and Ruth Scott were from the Chicago Convention Bureau.

C. R. Bailey, National LP-Gas Institute, Tulsa, tells a morning group what to do to be safe.

The convention committee was composed of Peter A. Anderson, chairman, S. Beske, W. T. Joplin, Hermann Paris, and E. E. Rapp.

Quentin Jones Will Manage Louisiana Dealers Association

The Louisiana Butane Dealers Association board of directors has appointed Quentin Jones, president, to take over temporary management of the Association affairs.

This action followed the recent resignation of Hamlet D. May as executive secretary.

Customer Increase 60% Since War's End

INDICATIVE of the rapid potential for expansion that exists in the LP-Gas industry is the record of Roberts and Young, Winthrop, Maine, propane dealers handling United Distributors, Inc., gas out of Portland.

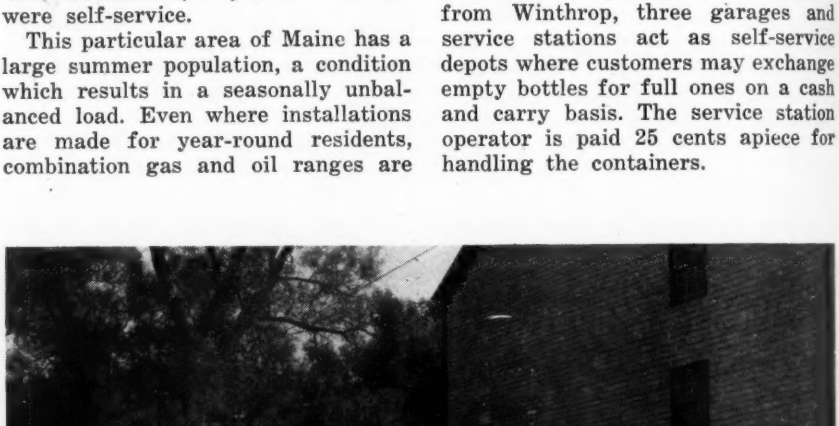
Leon C. Roberts reports that at the end of the war they had approximately 500 retail customers, and that since VJ-Day they have been able, in spite of shortages, to make 308 new installations, only a few of which were self-service.

This particular area of Maine has a large summer population, a condition which results in a seasonally unbalanced load. Even where installations are made for year-round residents, combination gas and oil ranges are very common, the oil side being used for cooking and water heating in the winter when kitchen heat is desired. Despite the 60% increase in customers since the war, Mr. Roberts estimates that if appliances and equipment were available 300 more connections could be made almost immediately.

The large building shown in the photograph is used to warehouse appliances, and a small display floor is maintained in connection with the company offices which occupy one side of the first floor.

Branch Self-Service Stations

For the convenience of self-service customers in points some distance from Winthrop, three garages and service stations act as self-service depots where customers may exchange empty bottles for full ones on a cash and carry basis. The service station operator is paid 25 cents apiece for handling the containers.



This building houses the appliance warehouse, display room and offices of Roberts & Young, Winthrop, Maine, propane dealers.

PUMP PROBLEMS

Important Installation Features — A Summary

By R. STANLEY SMITH

Manager, Smith Precision Products Co., South Pasadena, California

AROUND 90% of the butane-propane pumps shipped out by our company during the present year, have been installed by customers who are no doubt already familiar with the special problems involved in their use. These pumps are giving satisfactory service with no request for special information. Approximately 10% of our purchasers have requested installation advice, most of which has been adequately answered by sending reprint copies of the articles contributed by the writer during the past year, for publication in BUTANE-PROPANE *News*. That these articles have at least proven helpful in these cases has been an inspiration to continue to cover other basic principles in B-P Gas pumping, and to help in the solution of new installation problems which continue to come up under varying conditions of operation.

R. Stanley Smith

It will be the purpose of the present article, as well as that of several succeeding articles, to summarize the main items which have most frequently been found troublesome, and to cover the basic differences to be considered in the pumping of B-P Gas as against the comparatively simple handling of other fluids such as oil, water, or gasoline.

1. The Pump Intake Line.

(a) Place the pump as close as possible to the source of supply, and keep the tank level as high above the pump inlet as is practicable.

REASON: The liquid must flow into the pump by gravity, since any reduction of the pressure in the intake line by suction to a pressure less than that in the tank, will cause the liquid to vaporize, resulting in a definite reduction in the volume of liquid pumped.

(b) The intake line must be of ample size to carry the flow without material resistance. The substitution of 45° elbows or bent pipe is desirable over the use of 90° elbows.

REASON: Same as for item (a) above. Each change of flow direction adds to the total head pressure required to feed the pump intake without the formation of vapor. Such vapor proportionately reduces

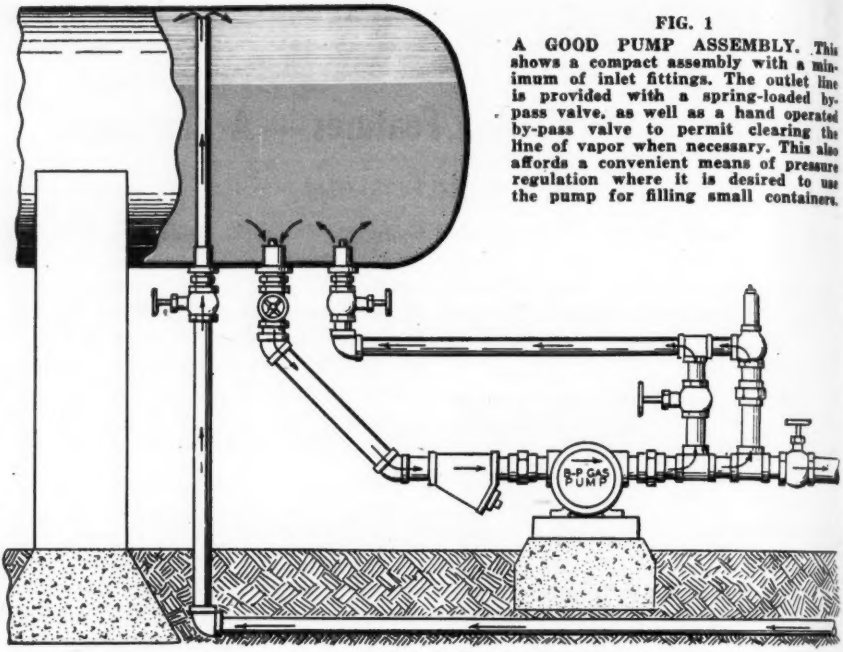


FIG. 1

A GOOD PUMP ASSEMBLY. This shows a compact assembly with a minimum of inlet fittings. The outlet line is provided with a spring-loaded by-pass valve, as well as a hand operated by-pass valve to permit clearing the line of vapor when necessary. This also affords a convenient means of pressure regulation where it is desired to use the pump for filling small containers.

the volume of solid liquid flowing into the pump.

(c) If globe valves are used in the inlet line, have these oversize. Lubricated, plug type valves are to be preferred except for the difficulty of keeping them from leaking.

REASON: A globe valve presents a tortuous path for the flow of liquid, with many directional changes, while a plug type valve has a straight-through run. The restriction of a globe valve may be reduced to as much as one-fourth, if the size is increased so the passage areas are doubled. Plug type valves operate best and give a minimum of leakage trouble in service, if they are given limited lubrication after each use. (See Note 1 below).

(d) "Excess-flow" valves cause a very serious resistance to gravity flow. For the tank liquid outlet line, provide an oversize excess-flow valve where this is practical. Certain types of so called "internal valves" permit a much freer flow, when these can be substituted for the conventional "excess-flow" valve.

REASON: The usual excess-flow valve has a very restricted flow area, as well as requiring many changes of flow direction in the

NOTE 1. Considerable additional information is contained in the article "Pump Starvation—Cause, Effect and Cure," published in BUTANE-PROPANE *News*, July, 1945.

passage of the fluid. Doubling the area of the flow passage will theoretically reduce the flow resistance to one-fourth, when this can be done. Internal valves have a more direct flow path and therefore cause considerably less resistance. (See Note 2 below).

(e) Provide an oversize strainer. Keep it clean.

REASON: Regardless of the usual strainer screen area being considerably greater than the pipe area, the division of the flow through the myriad of screen passageways usually causes a resistance far greater than the pipe area. Clogging of the strainer is a frequent cause of noisy pump action, with unsatisfactory volume or pressure development.

(f) Do not expect as good results when pumping out of a tank having a so-called dip-tube construction, (as shown in Fig. 2) in place of a bottom tank outlet.

REASON: In addition to the

NOTE 2. See "Tank Truck Installations," BUTANE-PROPANE *News*, February, 1946.

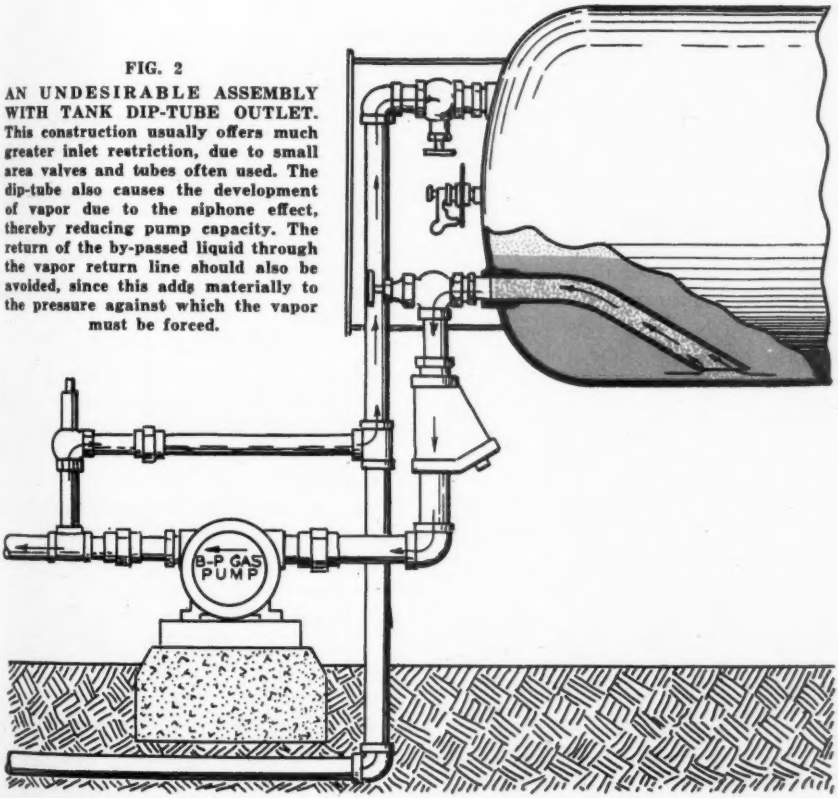


FIG. 2
AN UNDESIRABLE ASSEMBLY WITH TANK DIP-TUBE OUTLET. This construction usually offers much greater inlet restriction, due to small area valves and tubes often used. The dip-tube also causes the development of vapor due to the siphone effect, thereby reducing pump capacity. The return of the by-passed liquid through the vapor return line should also be avoided, since this adds materially to the pressure against which the vapor must be forced.

greater restriction of flow area usually found in the dip tube type outlet, the raising of the fluid by siphon action brings about the formation of a large vapor content in the pump inlet line. (See Note 3 below).

(g) Avoid vapor pocketing in the pump. This can be prevented by having a rising line from the pump to the supply tank.

REASON: If inlet line is dropped as shown in drawing FIG. 3, the sun's heat may cause vapor to form in the pump body, which it will be difficult to eliminate on starting the pump. This condition results in serious pump wear, the same as in operating the pump dry, and it will also be difficult at times to pick up the liquid flow. Refer to item 6b, appearing later in this article.

2. The Pump Outlet Line.

(a) It is a good rule to see that the flow from the pump is never restricted to less than one-fourth of its rated capacity.

REASON: If the passage of liquid is too much restricted, there may not be enough through-flow to carry off the normal heat generated in the pump, thereby causing vaporization. (See Note 4 below.)

(b) While it is less important that the outlet line be large and free, as is advocated for the inlet line, too much restriction will result in the development of an unnecessarily high differential pressure with a loss of power and increased pump wear.

NOTE 3. See "Pump Problems," BUTANE-PROPANE *News*, October, 1945.

REASON: If the outlet is not properly proportioned to the pump capacity, there will be a considerable backslip through the pump gear teeth, generating heat and consequent vapor. This may make the pump noisy and erratic in the development of adequate pressures. (See Note 4 below.)

(c) A by-pass valve set at a reasonable pressure differential and with a return line to the supply tank, and not to the pump intake line, will help to maintain a constant flow through the pump under varying delivery conditions.

REASON: With such an outlet release, new, cool liquid is constantly entering the pump, regardless of a limited discharge through the outlet line. Also, the development of an excessive differential pressure is thereby avoided. (See Note 5 below.)

(d) The by-pass valve should operate on a "differential" pressure and not against a fixed absolute pressure.

REASON: With a "differential" type valve, the pump will have a constant load regardless of the pressure in the supply tank, under varying atmospheric temperature changes, or the type of fluid, (butane or propane) being handled.

(e) Pressure gages should be

NOTE 4. For more complete information on these subjects refer to "Balancing Pump and Manifold Capacities in the Small Bottling Plant," BUTANE-PROPANE *News*, November, 1945.

NOTE 5. For complete explanation of by-pass installation see "By-Pass Merry-Go-Round" BUTANE-PROPANE *News*, September, 1945.

provided for convenient reading of pump inlet and outlet pressures. It is advised that these be protected by the insertion, ahead of the gage, of ¼" pipe size needle valves.

REASON: It is impossible to know just how a pump is performing without an accurate check of the pressure differential developed. The use of a needle valve ahead of the gage makes it possible to control vibration of the gage hand, so prolonging the life of the gage. It is also possible to entirely remove the gages, inserting them only at intervals for test purposes. It is also advisable to reverse the position of the gages during test, as a check on their accuracy.

3. The Vapor Return Line.

(a) An adequate vapor return line should be provided for all large deliveries.

REASON: This insures a considerable reduction in the pressure differential pumped against, and makes for faster transfer.

(b) Pressure gages in good working condition should be provided at both ends of the vapor line, so that comparative readings may be taken to determine the pressure differential.

REASON: It is often surprising how ineffective a vapor return may be in balancing pressures, particularly if it is completed by a hose line of too small size, of too long a length, or one in which the lining has deteriorated to the extent of blocking the passage of vapor, as has frequently been found. (See Note 6 below.)

4. Using A Metered Outlet.

When a meter is used, it is necessary to provide a so-called "back-pressure" valve. Do not have this set for too high a pressure differential.

REASON: The purpose of the back-pressure valve is to prevent the formation of vapor in the meter. Without such a provision, were the outlet valve to be opened, the pressure might momentarily be reduced in the meter to a point where it was less than the pressure in the supply tank. In this case, the fluid would tend to boil, and the gas so formed in passing through the meter would register the same as an equal volume of liquid. A back-pressure of 5 to 10 pounds is usually enough to avoid forming gas, and a greater back-pressure only adds to the total resistance which must be pumped against. (See Note 7 below.)

5. Filling Single Cylinders and Small Containers.

It is not good practice to attempt filling single small units with a large capacity pump. Where bottling operations are contemplated, a manifold should be provided having several outlets. (See Note 4.)

REASON: Taking for example, a 50 GPM pump filling into a single 100 lb. cylinder. The valve passageway provided in these cylinders is only ¼" in diameter. To deliver even one-half of the pump capacity,

NOTE 6. See "Pump Problems," BUTANE-PROPANE *News*, October, 1945.

NOTE 7. For greater detail information relative to these subjects see "Tank Truck Installations," BUTANE-PROPANE *News*, February, 1946.

or 25 GPM, through this valve would involve a fluid velocity in the valve passage of 250 feet per second, requiring very heavy pump pressures to attain. On the other hand, if the pump were to be arranged to feed a manifold to carry this volume to four such bottles at the same time, the pressure involved would drop theoretically to one-sixteenth that involved in the example above and actually result in a much increased output with comparatively little strain on the pump.

6. General Operating Cautions to Promote Best Service from Pump.

(a) Do not permit pump to be operated after supply tank has been pumped dry.

REASON: Nothing causes more severe pump wear than operating against pressure without liquid in the pump.

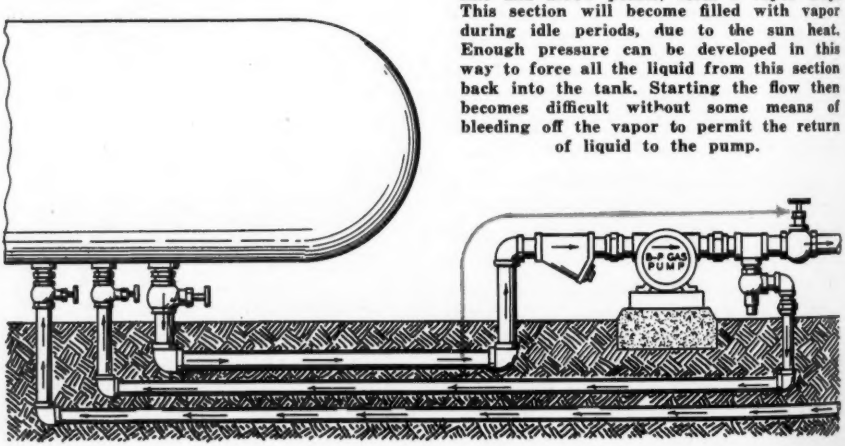
(b) A hand-operated by-pass valve is often a very desirable feature in any installation, to clear the pump and lines of vapor when starting.

REASON: Assuming that the pump is exposed to the sun's rays, or is housed in a warmer place than the storage tank, this absorbed heat will vaporize the fluid in the pump and drive it back through the pump inlet into the tank. Under these conditions, the pump may be completely dry when started, and it may be difficult to draw liquid to the pump, should the only outlet be against a higher pressure. See drawing Fig 1. (Also see Note 8 below.)

(c) Do not permit initial leaks

FIG. 3.

ANOTHER UNDESIRABLE PUMP INLET LINE ASSEMBLY. 1. Tank is too low, resulting in formation of vapor in intake line when liquid level is low. 2. In order to place part of the inlet line below ground, the total length of the intake line has been increased, besides adding two 90° elbows, all of which increases inlet friction. 3. Due to the dipped inlet line, the pump and piping section indicated by the line and arrow points, form a vapor trap. This section will become filled with vapor during idle periods, due to the sun heat. Enough pressure can be developed in this way to force all the liquid from this section back into the tank. Starting the flow then becomes difficult without some means of bleeding off the vapor to permit the return of liquid to the pump.



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to develop either in your pump packing box or in your lubricated plug valves.

REASON: If considerable attention is given to your pump packing box and the lubricated plug valves, particularly during the first few weeks of operation, so that no initial gas leaks are developed, you will probably experience very little trouble from leaks later on. On the other hand, if gas leaks are not given attention, channeling through the packing or grease seal may result, after which it becomes much more difficult to stop the leak without completely repacking, or reworking in the case of plug valves.

NOTE 8. See "Cause and Prevention of Vapor Lock," BUTANE-PROPANE *News*, June, 1945.

LPGA Board Holds Important Chicago Meeting

At the Sept. 20 meeting of the executive board of the Liquefied Petroleum Gas Association in Chicago, the directors filled several vacancies in the board's membership and approved the recommendations for the personnel of many of its regular committees, including those on Appliances, Constitution and By-Laws, Finance, Specifications, Insurance, Membership, Publicity, Technical and Standards, Transportation and Safety. The Rules and Procedure committee was eliminated, the Chicago and New York offices of the association to handle its work.

The Legislative committee is now to be composed of directors representing the various Sections, it to be concerned with policy matters with respect to legislation but the contact work to be performed by Arthur Kreutzer, association counsel.

Activities in 25 states were reported in which legislation affecting distribution of LP-Gas has been enacted or proposed. The association is offering its model law and consultation services to law-making bodies wherever possible.

The Technical and Standards committee announced a meeting for Dec. 2 in Chicago.

The board of directors of the Liquefied Petroleum Gas Association in session Sept. 20 at the Stevens Hotel, Chicago.

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North Eastern Section Hears Why Entire Gas Industry Should Unite

To Combat Competition

HAVING regaled their hopes and whetted their commercial appetites at the sight of the biggest display of gas appliances and equipment ever assembled for one showing, 250 members and guests of the Liquefied Petroleum Gas Association assembled for that organization's North Eastern Section's meeting and luncheon at the Hotel President, Atlantic City, on Oct. 10.

The occasion for the display was the Gas Appliance Manufacturers' Association exhibit held in conjunction with the 28th Annual Convention of the American Gas Association. For the first time in AGA history, liquefied petroleum gas operators had been specifically invited to attend the convention and inspect the appliances and equipment shown. In spite of the wealth of gas-using merchandise that had been revealed to the guests of the LP-Gas industry, who moved through the 60,000 square feet of display booths, speakers at the luncheon were prone to emphasize the difficulties and the problems that lie ahead, rather than to develop the already obvious theme that when and if salable merchandise becomes available the industry's opportunities for expansion may literally stagger the imagination. LP-GA Section Chairman Roy E. Forsberg, of Country Gas Service, Inc.,

W. A. NAUMER

LYLE HARVEY

presided at the luncheon, introduced guests from England, Australia, Canada and Mexico, and then called upon the four speakers slated to address the gathering.

H. Emerson Thomas, of the Fuelite National Gas Corp., presented figures compiled from a national survey undertaken for confidential study indicating that the rural and small town markets into which butane and propane expects to continue its rapid advancement are already well indoctrinated with electrical cooking and water heating propaganda. The aspirations and desires of farm and hamlet housewives to preside over all electric homes and kitchens indicated, in the opinion of this speaker, that further gas extension cannot be anticipated as a matter of course. He strongly advocated greater uni-

The luncheon meeting of the North Eastern Section, LPGA, in Atlantic City, Oct. 10.

ty in the ranks of all LP-Gas factors from refiners and producers down to the ultimate and indispensable retail dealer.

The speaker pointed out that while liquefied gas inevitably benefits from the big scale advertising and promotion that is being carried on by the gas utilities, this free ride cannot be expected to take the place of an organized and continuous promotion of butane and propane by the butane-propane industries.

Walter A. Naumer, manager of the Pyrofax Division of the Carbide & Carbon Chemicals Corp., also sounded a warning note as he discussed in some detail the contents of a pamphlet, "Report to Utility Executives on LP-Gas Competition" prepared by the National Electrical Manufacturers Association and circulated extensively to the electric utility companies of the nation. (BUTANE-PROPANE *News*, October 1946, Page 15).

The report, which has been copyrighted and circulated in considerable secrecy through the electrical industry, is in the nature of an alarmist warning to electrical companies that bottled gas bids fair to thwart them in their plans for postwar expansion into the domestic cooking and water heating load beyond the confines of metropolitan and urban areas.

Noteworthy in the opinion of Mr. Naumer was the fact that the electrical industry views LP-Gas with much the same apprehension that marks the bottled gas industry's view of electrical competition.

The NEMA report concludes with a recommendation for a four-point development and promotional program embracing: (1) An aggressive advertising campaign aimed at the small town and rural markets; (2) an organized retail sales plan to enlist the cooperation of local electrical dealers, particularly in the selling of ranges, water heaters and refrigerators; (3) a local publicity campaign similar to the one that is already going forward under the auspices of the LP-Gas As-

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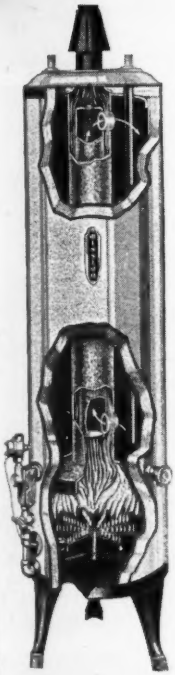

The inner tank circulation feature★ of Mission Senior exposes over double the normal tank area to heat absorption. Ordinary heaters offer but 3½ sq. ft. of heating surface to direct heat action.

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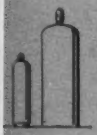
—is employed in the manufacture of Scaife Cylinders, assuring uniformity through every phase of production.



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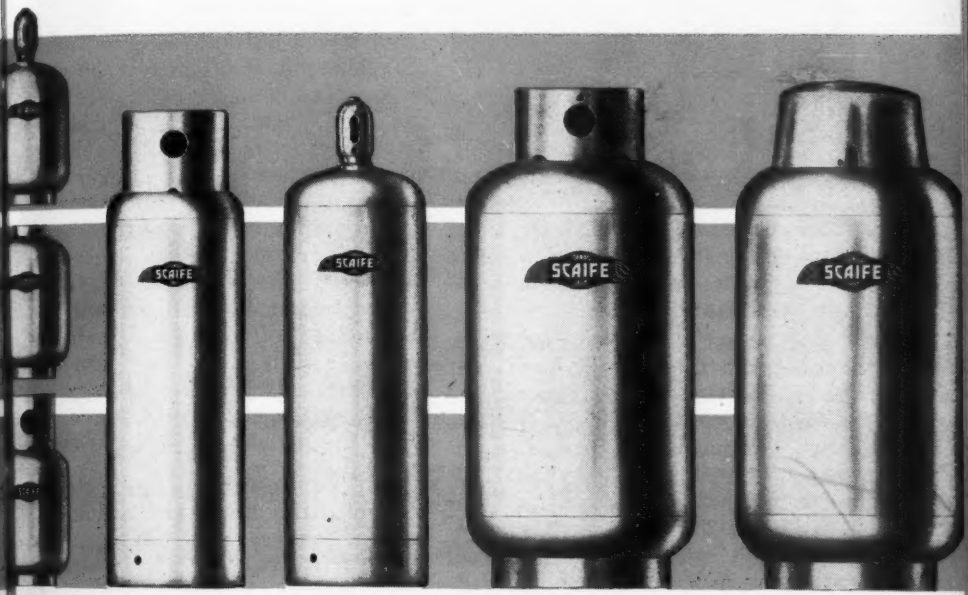

Write for Bulletin No. 321

This new Bulletin illustrates the wide range of Scaife Cylinders available for every LP-Gas need, with complete details on capacities, dimensions and approximate weights for Butane, Propane and Water. Write for your copy today!

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sociation; and (4) a consumer education program to be promulgated through county agricultural and home demonstration agencies, home economics teachers and farm women's organizations.

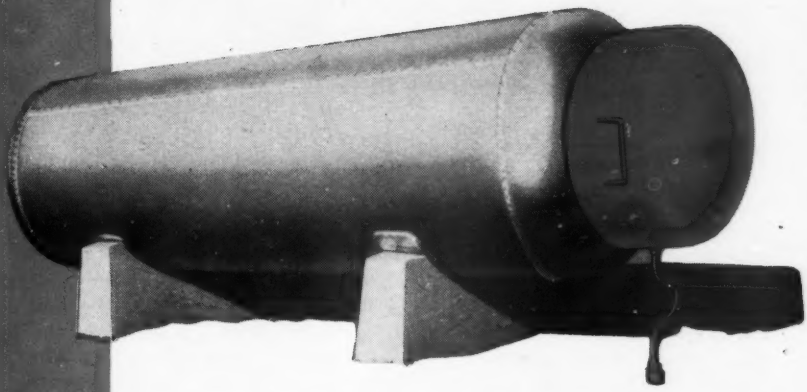
The report to Utility Executives concludes with the statement that "today LP-Gas competition can be headed off, tomorrow it may be too late." Tansposing the fuels to coincide with the interest of his audience, the speaker observed that unless electrical competition is effectively and adequately challenged, tomorrow may be too late for LP-Gas.

Lyle C. Harvey, president of the Gas Appliance Manufacturers' Association, and regarded by many as one of the most energizing factors in his organization, voiced a strong plea for a united gas industry. Speaking from his long experience as a heating equipment manufacturer in constant contact with the utility gas company, he outlined four basic points for the bottled gas and butane industry to follow in the furtherance of its expansion program:

1. Consolidate present gains. The rapid growth of the industry has of necessity left some weak spots in its organization and methods. Now is the time, in the absence of any appreciable quantities of merchandise to be sold, for the industry to put its house in order, eliminating the unfavorable factors that might mitigate against future development. Since some degree of regulation is likely at state, if not national levels, the industry should prepare to work under any legitimate regulation. The speaker suggested that where regulation appears inevitable, it might be well to present model laws and ordinances to the end that such regulation might be well advised and workable. Self-regulation, he counselled, is the best regulation and this can only be imposed by every individual operating in accordance with the highest possible standards.

2. Prepare for more competition. Anticipating that competition will become increasingly stronger and more effective, Mr. Harvey advised the liquefied gas industry to study the techniques of sales and service which have been responsible for the growth of gas and electric utilities. Many lessons, he implied, can here be learned that may be applied to butane and propane operation.

3. Set plans for future growth. Among other activities recommended, the GAMA president said the LP-Gas industry should outline a policy to support continuous research; set and adhere to standards of practice, and follow the gas utility pattern of cooperating with the



There is an American **"RED HEAD"**
that will meet your peak season
STORAGE — GAS-GENERATING — DISPENSING
needs

American "RED HEAD" Storage, Gas-Generating and Dispensing Systems are available in four convenient sizes: 155, 320, 573 and 1144 gallon water capacity. Only one connection is necessary and the "RED HEAD" is ready for household, commercial or industrial service. It is made for 250# working pressure API-ASME Code or 200# working pressure ASME Code and will comply with National Board of Fire Underwriters' requirements—assuring both dealer and consumer that any LP-Gas can legally be stored in the "RED HEAD".

AMERICAN PIPE & STEEL CORPORATION
Engineers, Designers, Fabricators
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AGA laboratories. He also recommended that the possibility of amalgamation or alliance with the AGA be studied and that industry advertising and promotion policies be uniform and in conformity with those of the gas utilities.

4. Base everything on a concept of better service to the consumer. Service to the consumer, said Mr. Harvey, must be part of every plan that the industry may consider for its own advancement. When volume expansion again becomes possible, consumers will pick and choose as they have in the past, and they will inevitably select the fuel service that offers them superior conveniences and good value.

Harold Massey, assistant managing director of GAMA, and impressario of the gas appliance exhibit, spoke briefly on the show at the auditorium, inviting all LP-Gas men present to attend it as guests of the appliance manufacturers.

Personnel Changes Occur In Ransome Organization

Tallent Ransome has been chosen to fill the position of president of the Ransome Co., Emeryville, Calif. A second new appointment is that of Rudy Wagner, who will take over the position as head of the company's butane division.

These appointments came as a part of a general executive reorganization brought about by the death of Bernard Ransome, who for many years headed the company as president. He was also widely known for his extensive work in the paving field as a contractor and supplier of materials.

Joining the staff of the Ransome

TY RANSOME

CARL GOLDEN

Co. as chief engineer in charge of production for the burner division, Carl Golden returns to the liquefied petroleum gas industry after an absence of nearly four years. During this time Mr. Golden served as a member of Army Ordnance.

Formerly with Standard Oil, Mr. Golden has been active in the BP-Gas industry for many years and has gained a reputation as an expert in this field. His work with Ransome Co. will include engineering and development of this organization's burner division.

LP-Gas Ruled Exempt from Price Control

The following bulletin has been released by Arthur C. Kreutzer, legal counsel for the Liquefied Petroleum Gas Association:

"General Counsel for OPA in an interpretation issued Sept. 23, 1946, on the question as to whether the term 'petroleum' as used in Section 1A (d)(4) of the Emergency Price Control Act of 1942, as amended, includes petroleum gas, has concluded that this section of the Act applied to petroleum gas and it consequently is exempt from price control."

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YOU AIM AT WITH
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To do a good selling job, your literature and advertising matter must be well planned and designed to command enough of the Buyer's time to tell your story.
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Oklahoma LPGA Will Give Annual Awards For Safe Handling of LP-Gas

By O. D. HALL

MORE than a score of speakers, 27 exhibitors and a number of discussion leaders, contributed to a highly successful five-day session of the First Annual Convention and Southwest Appliance Show of the Oklahoma Liquefied Petroleum Gas Association at the Skirvin hotel, Oklahoma City, Sept. 17-21.

FRED L. YATES

Executive Secretary Fred L. Yates revealed that nearly 400 LP-Gas dealers, distributors and manufacturers attended.

Important steps were taken at the convention toward solving some of the principal insurance and safety problems of the industry. The insurance panel on the opening day revealed that a number of the leading insurance companies, whose representatives talked and answered questions from a head table, have set up rate schedules which apply especially to the BP-Gas industry; that some of them have reduced their rates, and that all regard the industry as making real progress in the direction of reducing risks. They pledged cooperation with the safety program of the association.

During this session, Mr. Yates called attention to an outline for statewide organization of an Oklahoma LPGA Safety Council. Nineteen divisional organizations have been set up in the state to facilitate close association by dealers and handlers in discussing and carrying out the safety and other programs of the association. These divisional meetings will be held monthly and, in addition, each dealer is encour-

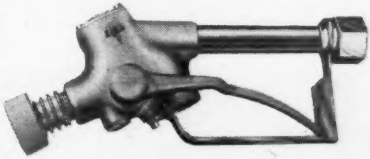
PRESIDENT CARL TICER

ADEL L.P.G. DISPENSING EQUIPMENT

is designed to meet the rigid requirements of the Bureau of Weights and Measures, the National Board of Fire Underwriters and the L.P.G. Industry.

You will find ADEL'S modern, high-pressure Liquefied Petroleum Gas Dispensers *right* for your operational needs.

The ADEL Buta-Fill Nozzle is fast coupling, automatic, light of weight and very maneuverable with ¼ inch and 1 inch connections.



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WRITE FOR FREE CATALOG AND NAME OF DISTRIBUTOR IN YOUR TERRITORY

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Designed for ECONOMICAL, PRACTICAL and SIMPLE installation. *Installed on any tank position.*

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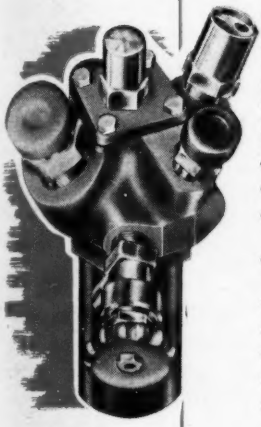
Available NOW for Immediate Delivery

CONTINENTAL CONTROL HEAD ASSEMBLY

reduces costs and hazards...meets all safety requirements

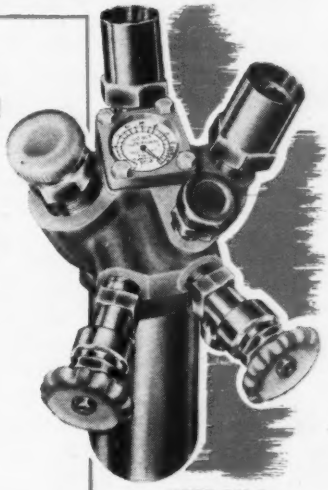


MODEL 201-A
for vapor or
dry system

SIMPLIFIED INSTALLATIONS WITH ONLY 1 CONNECTION!

The complete Control is factory assembled and tested, thus requiring only one tank connection to obtain these operating functions.

- QUICK FILL VALVE WITH SLUG CHECK
- VAPOR RETURN VALVE WITH SLUG CHECK
- VAPOR LINE SHUT OFF VALVE WITH OR WITHOUT SLUG CHECK
- LIQUID WITHDRAWAL VALVE WITH OR WITHOUT SLUG CHECK
- MAGNETIC FLOAT GAUGE
- PRESSURE GAUGE (OPTIONAL)
- SAFETY RELIEF VALVE
- PIGTAIL
- EXPANSION COIL
- PRESSURE REDUCING REGULATOR



MODEL 201-B
for vapor and
liquid systems

MODEL 201-A. Will accommodate 1¼" Filler Valve, ¾" Vapor Return, Relief Valve, Vapor Line Valve, Gauge Opening provides for the use of either float or slip-tube type liquid level gauges.

MODEL 201-B. Will accommodate 1¼" Filler Valve, ¾" Vapor Return, 2 Relief Valves, Vapor Line Valve, Liquid Line Valve, Gauge Opening provides for the use of either float or slip-tube type liquid level gauges.

MODEL 201-C. Special (Fitted to meet special requirements). Will accommodate 1¼" and 1½" Filler Valve, ¾" Vapor Return Valve, 3 Relief Valves, having a total relief area not exceeding 1.5 sq. inches relief area, gauge opening for use of either float or slip-tube type gauge, either one or two line valves, opening for pressure gauge (where required) and regulator.

THE CLIMAX CONTINENTAL Control Head Assembly is recommended for above ground and under ground systems.

Models 201-A and 201-B permit the filling, vapor recovery and liquid withdrawal through a single 2" or 2½" NPT riser.

The casting is a special heat treated aluminum alloy designed to resist the impurities in butane and propane. After machining, it is alumilited to prevent corrosion. This positive protective coating is the same as used by U.S. Navy during the war to protect all aluminum aircraft parts and fillings against corrosion. All valves are located for easy accessibility. An integral case baffle definitely prevents any liquid from getting into the house line.

The assembly is adaptable to a standard 2½" A.N.P. thread tank riser, size 2" A.N.P. thread may be had on application.

Available with fittings and may be had in various combinations with a selection of relief valves that makes it adaptable to all requirements up to 1500 gallons of propane. Climax Continental Control Head Assembly is designed with flexibility to adapt it to either a batch or flash system or both.

The Climax Continental Control Head Assembly, a simplified, compact, yet precision built unit, assures a safe system.

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aged to hold at least one meeting each month.

Five principal safety precautions have been set up and annual awards will be made at state conventions to truck drivers and/or handlers with no accident records during the past year. Drivers are asked to make weekly reports on condition of truck, judging from performance while on the road; weekly checks on brakes, tires, horn, steering apparatus and safety valves on tanks; thorough checks on trucks at least every six months, motors tuned up and whole equipment, including tank, declared safe. All connected with the company should observe good plant housekeeping methods and check fire and accident hazards. Safety bulletins furnished by the insurance companies and Oklahoma LPG association are to be constantly changed on bulletin boards and other strategic places.

Annual awards also will be made to owners and operators for the best kept plants. Truck drivers and handlers are to be paid nominal sums for attending division and district safety meetings. Drivers are to be given merits earned through safe and careful handling of trucks which result in no accidents and lessen repair costs on the trucks. Nominal amounts for attending safety meetings and for merits earned are to be presented to drivers at Christmas time.

The most efficient and safest methods of transferring BP-Gas from tank cars or transports to storage and from storage to delivery trucks and into systems of customers were discussed before a panel composed of Charles Corken, Corken Pump Co., Oklahoma City; J. O. Green, Oklahoma Liquefied Gas Co., Seminole, and Rex Phillips, Warren Petroleum Co., Tulsa, and presided over by Howard Nash of Guymon, Okla.

Dealer Tells Experiences

Successful methods of merchandising B-P Gas were presented in a general session by Monte Taylor, Joplin Butane Gas Co., Joplin, Mo. He warned against cutting prices, advised selling of tanks of sufficient size to meet all requirements of a customer for one month during winter time or heaviest demands, and systematic routing of deliveries.

An enlightening talk, illustrated by slides, was presented by R. A. Findlay, Phillips Petroleum Co., Bartlesville. This traced the manufacture of B-P Gas through various stages of discovery and production of oil and the processes of refining the products.

The "big boss" of the B-P Gas dealer is the buying public and dealers and employes should attempt

NOW!

THIS NEW

PROPANE TANK

for Home, Farm, Ranch

ASME CODE CONSTRUCTED
EVERY TANK DEHYDRATED
HYDROSTATICALLY TESTED

AUTOMATICALLY
WELDED
CONFORMS TO NBFU CODE
PULL-TESTED LIFTING LUGS
INSURANCE COMPANY INSPECTED
PERIODIC X-RAY ON PRODUCTION LINE

This tank is bound to be good because it is made in one of the nation's largest and finest equipped pressure vessel plants originally designed to manufacture the big, high pressure, high temperature vessels in which Propane itself is made.

Write for illustrated literature and prices.

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EFFICIENCY B S & B RELIABILITY

Ask Your B S & B Man

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REX PHELPS

to see each customer through the latter's viewpoint, counseled George H. Schlatter, director of the sales and service training department, American Stove Co., St. Louis. The customer expects courtesy, interest in his problem, knowledge of the product or appliance by the dealer or his clerk, patience and enthusiasm from the salesman. The importance of carefully selecting and training employes, especially of acquainting them with the advantages of gas over electricity and other fuels for cooking and heating, was stressed by the speaker.

Talking on the relation of service to sales, Seward Abbott, regional manager, Servel Inc., Dallas, said that much depends on proper installation and instruction as to use of the refrigerator. "The manufacturer can contribute materially to your service ability but he depends very much on what happens in your organization," Mr. Abbott said.

The big potential market for B-P Gas equipment and appliances in Oklahoma was pointed out by R. D. Oplinger, Tappan Stove Co., Oklahoma City, who said that 310,611 persons live beyond the natural gas mains in the state. The dealer who features quality appliances and knows how to face the greater competition which is coming from the electrical, coal and fuel oil industries, can progress rapidly in the business. The speaker emphasized the importance of installing only appliances especially engineered for B-P Gas use and warned against conversion jobs and against improper installations.

"It is vitally important that the dealer is fully informed about any item he has for sale," Paul Staude, Loyal, Okla., dealer, told the convention. He warned against selling tanks or other appliances too small to carry the customer's maximum load. He said that when a dealer sells a large tank he makes more money, has a better satisfied customer who gets more for his investment and who will take pride in his equipment. Tanks will last longer and give better service if properly sized. He explained why smaller customer tanks are less efficient than larger installations.

Natural Gas Was Represented

A direct contact with the natural gas industry was made through having on the program L. J. Fretwell, chief commercial engineer, Oklahoma Natural Gas Co., Tulsa, who spoke on the subject: "Commercial Cooking Possibilities for Liquefied Petroleum Gas." He declared that B-P Gas has all the excelling qualities of natural and manufactured gas and has a very bright future.

An important phase of the B-P

MORE WOMEN COOK ON

Magic Chef

THAN ON ANY OTHER RANGE

★ 2 to 1 PREFERENCE FOR *Magic Chef*

TO LP-GAS DEALERS THIS MEANS....

The easiest range of all to sell. A range that enjoys a 2 to 1 consumer preference. A range backed by 26 years of the strongest national advertising in the gas range industry. A range which has consistently been the leader in the LP-Gas field. We repeat, Mr. Dealer —Magic Chef is the easiest range of all to sell.

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The EASIEST *Range of all* TO SELL!

L. J. FRETWELL

R. D. OPLINGER

Gas industry is the commercial cooking and baking load, Mr. Fretwell said. In order to have a well balanced commercial gas sales program, requirements include, selling the best commercial equipment, having a thorough knowledge of all such equipment, recommending equipment for functional operation, and knowing the correct arrangement and location in the kitchen or elsewhere to do the job properly.

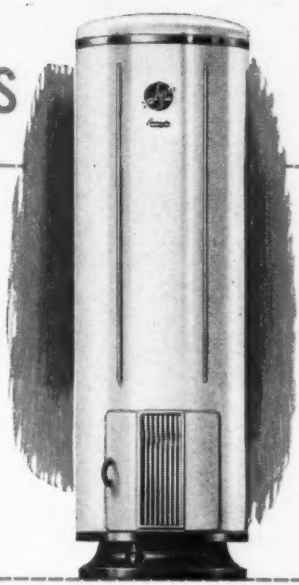
The tremendous sales volume that can be built up for the B-P Gas industry by flame cultivation for elimination or mechanically controlling weeds and grasses in crop rows, was pointed out by Thomas L. Baggette, research and sales engineer, New Holland Machine Co., in a paper of "What the Sizz-Weeder Means to Summer Business." He cited as an example that, "The minimum fuel a 4-row Sizz-Weeder will consume, used only 10 hours per day, 5 days per week and 8 weeks per year, is 4800 gallons of fuel. On many plantations these machines operate 20 weeks with a total consumption of 16,000 gallons," Mr. Baggette stated. The speaker solicited the cooperation of the industry in solving the problems encountered during tests in 1946 made in the cotton belt during crop-growing conditions. Initial tests also were made during that season on corn, truck crops and nursery stock and these tests will be further developed during 1947.

(For complete talk by Mr. Baggette, see Page 69.)

Commercial and industrial possibilities for LP-Gas were discussed by Harold W. Smith, president, American Liquid Gas Corp., Los Angeles. "Due to certain inherent qualities, LPG fuel often gives many advantages over other fuels, and these advantages may be utilized more and more to expand the industry," said Mr. Smith. The dealer "should develop the domestic uses and the industrial, farming and trucking requirements in such a way as to produce a steady requirement of fuel each month throughout the year. The recent efforts of many of us in the LPG industry to develop load leveling business will lead to a profitable operation for the refiner, for the transportation operators and for the dealers in keeping their own delivery and storage facilities busy constantly," the speaker declared. (For full text of Mr. Smith's talk see BUTANE-PROPANE *News*, October issue, Page 62.)

The "New Freedom Gas Kitchen" should become a symbol of good gas service at work in its most attractive setting, declared H. Vinton Potter, director of the New Freedom Gas Kitchen Bureau, New York. Mr. Potter said that the bu-

What Every Homeowner Should Be Told About WATER HEATERS



"If your water heater isn't *big* enough and *fast* enough, those wonderful new kitchen and laundry appliances won't work."

Automatic washing machines and dishwashers, to operate properly, must have a dependable supply of *hot* water... and *plenty* of it. That means an automatic storage water heater capable of supplying hot water *when it's needed.*

And it must be *clean* hot water—free of any tank rust or corrosion.

SMITHway *Permaglas* Water Heaters meet ALL these new requirements. They have ample capacities for every need. Their *Permaglas* tanks are insulated with an extra-heavy blanket of Fiberglas.

HEATED WITH GAS... STORED IN GLASS!

There's Only ONE "*Permaglas*"... A Great Aid to Sales!

The mirror-smooth, sparkling blue glass-fused-to-steel tank resists rusting and corroding under *any* water condition. No more "tank rust spots" or corrosion dirt to soil clothes, streak dishes, stain the bath. Only the *Permaglas* has such a tank—the most important sales story of the year. Get the whole story for yourself. Send now for *The Inside Story of Permaglas.*

Permaglas A.O. SMITH glass lined

AUTOMATIC • STORAGE WATER HEATERS

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NEW YORK 17 • ATLANTA 3 • CHICAGO 4
HOUSTON 2 • SEATTLE 1 • LOS ANGELES 14

INTERNATIONAL DIVISION: MILWAUKEE 1—*Licensee in Canada: JOHN INGLIS CO., LIMITED*

Monte Taylor tells the convention about the operations of his company.

reau is not trying to put the utilities into the kitchen cabinet business but it is seeking to use the plan as a means of selling more and more gas and of bringing prestige to this fuel. The committee members who planned the New Freedom Gas Kitchen "must have been aware of the terrific propaganda campaign which has been waged by our competition, and they must have been heartened by the progress being made by a relative newcomer, the LP-Gas industry," Mr. Potter commented.

An inspirational talk was made by J. H. Williams, Chickasha, Okla., at the closing luncheon.

The main program included a dinner, entertainment and dancing on Thursday night with Association President Carl Ticer as toastmaster. A ladies' committee composed of Mrs. Carl Ticer, Mrs. J. L. Grigsby, Mrs. Fred Yates and Patricia Nix, provided three days of special luncheons, entertainments, book reviews, shopping and art center tours for the ladies attending the convention.

Free Rides to Exhibits

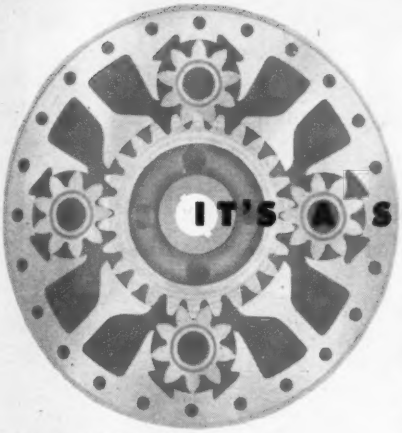
Special buses were provided at the Skirvin hotel, where convention sessions were held, to transport delegates to the B-P Gas exhibits in the Automobile building at the state fair grounds where a score of manufacturers had industry displays.

Exhibits remained open during the first day of the Oklahoma State Fair, Sept. 21.

Proof that BP-Gas people get around to see what is going on in other states was furnished by Executive-Secretary Fred L. Yates and other Association Officials, who had a series of pictures taken of delegates from other states to the recent Oklahoma convention, and Southwest LPG Appliance Show.

Ladies also attended in liberal numbers. The ladies' committee consisted of Mrs. Carl Ticer, Woodward, chairman; Mrs. J. L. Grigsby, Mrs. Fred Yates and Patricia Nix, all of Oklahoma City.

Panel and general discussion periods enlivened the sessions and gave executives and employes some valuable practical knowledge to take home with them.



IT'S A SPECIAL PROBLEM

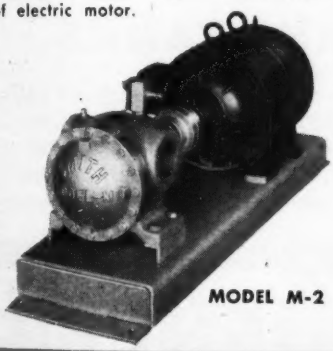
Pumping butane and propane presents special problems. First, L-P Gas is more than ten times as thin as water; and second, it must always be pumped ***at its boiling point.*** Therefore, ordinary pumps are not well suited to this service. To handle these fluids, a successful pump should be more exactingly designed, and built to greater precision.

Smith Precision Pumps are expressly designed for the one service of pumping butane and propane. They are built to exceedingly fine precision standards. It is for these reasons that, wherever Smith Precision Pumps have once been used, they have become standard equipment.

MODEL M-1044 PUMP
Capacity 20 GPM at 1800 RPM for direct connecting to 1½ HP explosion-proof electric motor.

MODEL M-2 PUMP
Capacity 50 GPM at 1800 RPM for direct connecting to 3 or 5 HP explosion-proof electric motor.

MODEL M-3 PUMP
Capacity 100 GPM at 1800 RPM for direct connecting to 5 or 7½ HP explosion-proof electric motor.



MODEL M-2

MODEL T-2

MODEL T-1044 TRUCK PUMP
Capacity 20 GPM at 500 RPM shaft speed, for direct connecting to truck power take-off.

MODEL T-2 TRUCK PUMP
Capacity 50 GPM at 500 RPM shaft speed, for direct connecting to truck power take-off.

MODEL T-3 TRUCK PUMP
Capacity 100 GPM at 500 RPM shaft speed, for direct connecting to truck power take-off.

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Buehler's uniform high production cylinders and spheres for Butane and Propane are designed in accordance with API-ASME Codes for safety and long life. Extra care is given the critical points—welding, finishing, fittings. You can't buy better tanks at any price. Order now for early delivery. Spheres and horizontal Butane-Propane tanks are now in production.

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QUALITY YOU CAN SEE

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What Flame Weeding Means To The Summer Load

By THOMAS L. BAGGETTE
Research and Sales Engineer
New Holland Machine Co., New Holland, Pa.

WEEDS and grasses* can be mechanically controlled in a crop row by the simple process of flame cultivation. This cultivating practice sears young weeds and grass while they are still very tender by the application of hot flame directed into the crop row.

T. L. BAGGETTE

This operation, to be successful, must be used at a time when the crop which is being flame-cultivated is of sufficient size and fiber content to withstand the high temperatures produced by the hot blast. So long as the flame is directed close to the ground and no deflection of the flame up into the crop occurs, any crop thus far flamed will withstand temperature ranges of 1800 to 2200° Fahrenheit when that crop has reached a minimum height of eight inches and the tractor speed is at least two miles per hour.

The increased uses of the "Sizz-Weeder" in various row crops has also shown its effectiveness for pre-emergence flaming. This clears the entire row of the first growth of noxious weeds and grasses and permits the crop to break through in a clean drill and grow off ahead of the next growth of weeds and grasses.

From our experience during the past season, we foresee the use of flame as a cultivating tool in many various row crops throughout the United States.

The most spectacular showing of flame cultivation and the one which has aroused the most interest has been that done in sugar cane and cotton. Sugar cane cultivation is centered principally in Louisiana and is used from the latter part of March to the first of June. Sugar cane cultivation by flame begins again around Sept. 15 and continues through to frost, around Nov. 1.

Sizz-Weeding in cotton has been concentrated to date in the rain-grown areas of the Cotton Belt. Chief utilization has been in the Mississippi Valley area—Missis-

*A paper delivered before the Oklahoma Liquefied Petroleum Gas Association convention, Oklahoma City, Sept. 19-21.

sippi, Arkansas, Louisiana. Alabama, Georgia and the Carolinas have come into the picture during the past crop year, and there are a limited number of machines operating in Texas and Oklahoma.

If chopping by flame is to be considered in estimating periods of demand, the cotton industry will need fuel from April until August. However, if the cotton year should be rainy, rank growth may stop flame cultivation in late July.

The potentialities of flame cultivation for the irrigated sections of California and Arizona in cotton production are unlimited since conditions in those areas are such that supply of moisture is a controlled factor.

During the 1946 crop year Sizz-Weeding was introduced into these two states with varying degrees of success. One of the deterrents to successful flaming in the irrigated crops involves one of the pre-requisites to efficient flame cultivation in any crop. When the middles are plowed for handling the irrigating water, large clods are thrown into the crop row and later cause deflection of the flame up into the crop.

Care should be taken in preparing these furrows to prevent this occurrence since it is a known fact that crop rows should be flat for maximum weed and grass control by flame. There are a few other land preparation and planting practices that the farmer will have to correct before we can term Sizz-Weeding altogether successful.

As results from this year's limited experiments become known, we feel that some of the prejudice that believes we are lowering yields, killing cottons, etc., will disappear. Irrigated varieties have been successfully flamed in rain-grown areas but we are having to prove the resistance of their specific varieties of flame under their own immediate conditions. And that we are doing.

Flame cultivation is a proven, practical farm operation and the Sizz-Weeder an accepted farm implement. What this can mean to the farmer in terms of lowered cost of production and increased per capita farm income is beyond computation.

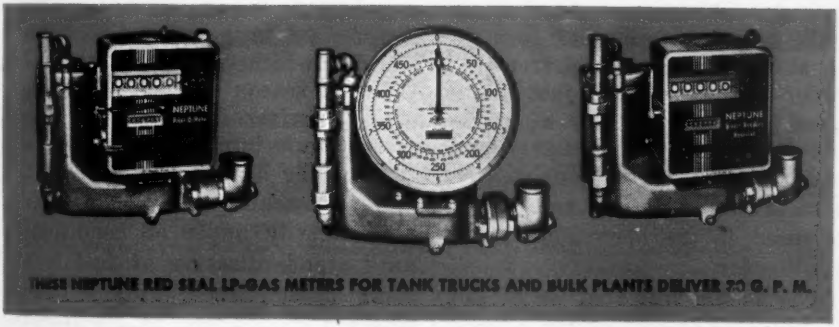
Of primary interest to you is the expanded market flame cultivation represents during the time of year that has heretofore been one of slack sales for the liquefied petroleum gas industry. Not only will this demand occur in the cotton and sugar cane producing areas, but also over the entire country.

The manufacturer and the farmer have both suffered many headaches in bringing to its present development the Sizz-Weeder and there are many more problems yet to solve. For the major part, these problems are yours as well as ours and the cooperation of the liquefied petroleum gas industry is needed in overcoming many presently existing barriers. These problems range from poor grades of fuel which cause inefficient operation of the equipment to confused and discriminatory state laws.

In many instances where dissatisfaction with the Sizz-Weeder was reported, we found the trouble to be the fuel which had been purchased from border-line refineries

METER *for Accuracy*

Meter all LP-Gas withdrawn from bulk storage or delivered to customers from dispensing units or tank trucks and you build business on the sound foundation of reliable accuracy. You step up the speed of truck loading and delivery operations. You eliminate overmeasure, find leaks more easily, and reduce handling effort. Equally important, Neptune metering promotes safety, greater care in product handling, and fosters good-will among those you serve. For complete facts about accurate, long-life Red Seal LP-Gas Meters, write Neptune today.



THESE NEPTUNE RED SEAL LP-GAS METERS FOR TANK TRUCKS AND BULK PLANTS DELIVER 70 G. P. M.

1¼" Red Seal Compact Type 1 D Meter with Print-O-Meter Register Model 333.

1¼" Red Seal Compact Type 1 D Meter with Round Dial Register Model 211.

1¼" Red Seal Compact Type 1 D Meter with Direct Reading Register Model 331.

NEPTUNE RED SEAL METERS

A-1014

NEPTUNE METER COMPANY
50 West 50th Street • New York 20, N.Y.

Branches: Atlanta, Boston, Chicago, Dallas, Denver, Kansas City, Mo., Los Angeles, Louisville, Philadelphia, Portland, Ore., San Francisco, and Long Branch, Ontario.

Discussing flame cultivation of cotton at the Delta Experiment Station demonstration at Stoneville, Miss. Left to right, Secretary of Agriculture Anderson; Charles A. Bennett, engineer in charge of U. S. cotton ginning laboratory at Leland, Miss.; Irl A. Daffin, president of the New Holland Machine Co., manufacturer of flame cultivator; Victor Despart, Jr., head of the flame cultivator division, New Holland Co.; and Dr. Clarence Dorman, director of the Stoneville Station.....

and contained high percentage of caustic and sulphur. These impurities will result in the fuel lines becoming choked and burners going out.

Another problem we have encountered is the varying quality of fuel delivered by the same distributors. Whether or not these distributors are guilty of furnishing at various times fuel from the border-line refineries just mentioned, we have no way of knowing; but we do know that where good fuel is delivered consistently, there is a minimum of trouble experienced in the operation of the Sizz-Weeder.

It is all too true that we do not yet know what constitutes a good grade of fuel but when that has been determined and distributors make it available for flame cultivation, the use of the Sizz-Weeder and liquefied petroleum gas are both going to expand rapidly.

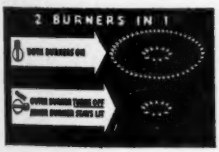
Within my experience I have seen liquid-fed burners and vapor burners both using what was sold as the same fuel and in one instance, the liquid burner did a good job, the vapor did not; and again the reverse has been true. We would like to know at what ratios fuels are blended, whether it is a 30-70 butane-propane; 40-60, 90-10, or whatever it happens to be. This is very true in the case of the Sizz-Weeder which was manufactured this last season to employ the use of a vaporizer for the conversion of the liquid into gas for consumption by the burner. We can never build a machine that will operate satisfactorily under all conditions until standardization of fuel is a thing accomplished. This is true whether the burner be for liquid or vapor.

We realize there is very little that can be done at the present time in regard to the extreme variance in price ratio from one section to another. In the East, liquefied gas sells by the pound, making it cost in some instances as

"Word-of-mouth" advertising in the past sold more than a million and a half gas ranges equipped with the Harper Center Simmer Burner. And now, for the first time, we are telling your customers about this famous top burner, using the leading national magazines shown here. It means that some 21,500,000 women readers will know how to identify Harper equipped ranges.

It's easy to trade-up your customers to a higher priced range by *demonstrating* the many advantages of the Harper Center Simmer Burner...the "2 burners in 1" top burner that gives just the right heat for every cooking requirement. The measured heat of the Cooking Burner eliminates "pot-watching"... keeps kitchens cooler...requires so little water that vital minerals and vitamins are always retained, making foods tastier, more nutritious.

To help you sell more, and *better* ranges, we have prepared a FREE booklet, "How to Sell More Gas Ranges," which contains a series of quick, convincing floor demonstrations planned to dramatize the advantages of the modern gas range. Send for copies for your salesmen. Harper-Wyman Company, 8562 Vincennes Avenue, Chicago 20, Ill.



The Harper Center Simmer Burner operates on the unique principle of "2 burners in 1"...a STARTING BURNER for frying and to start foods boiling, plus a small, economical COOKING BURNER, to maintain the cooking...both controlled by the same handle. It is subject to finer gradations of low heats—greater control and economy—than any other top burner made.

HARPER CENTER SIMMER

"...Holds the Lines for Gas"

HARPER CENTER SIMMER BURNER

high as 54 cents a gallon, as contrasted to six to nine cents in the Yazoo - Mississippi Delta when bought in tank car shipments.

If price could be based consistently on a per-gallon rate rather than by the pound, farm usage of liquefied petroleum gas would be greatly increased because of greater ease in handling and a more widespread acceptance of liquefied petroleum gas as a fuel that can be bought in large gallon lots rather than having to be weighed out by the pound. This practice in the East might require a special flame unit whereupon the 100-pound cylinders could be exchanged when empty, providing this would comply with existing regulations on this new implement.

Why Not the Farm Load?

Instead of encouraging the use of LP-Gas as a farm fuel, many distributors seem to be trying to make it as difficult as possible by virtue of exorbitant charges for storage facilities. Those dealers are going to kill the bird that might lay them a golden egg.

In some instances, storage facilities are furnished gratis to the farmer if he uses a certain gallonage; if he does not use this set amount, he is charged a rental fee. But often dealers try to sell tanks outright to the farmers at figures which are too costly to make the operation economical.

Such has been the abuse of this market that in some areas farmers are contemplating a return to kerosene or change to some other fuel than liquefied petroleum gas. The butane and propane industry should make every effort to build for itself a long-time, long-range business of supplying flame cultivation fuel and not try to make a million in a year or two and subsequently defeat its own business prospects and jeopardize a new agricultural practice.

Storage tank facilities on the farm should be aboveground, built in accordance with safety regulations, and of minimum 500-gallon capacity for servicing each flame cultivator unit. Tanks used for fueling the Sizz - Weeder should have bottom outlet for liquid withdrawal with connection as close as possible to the suction side of the pump. That pump preferably should be motor- or engine-driven, by explosion-proof assemblies.

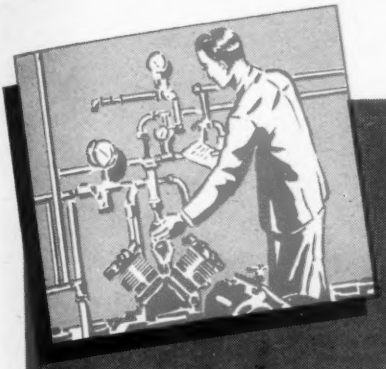
All tanks should be equipped with a vapor return valve on the top of the tank fitted for connection to the supply tank by a high-pressure hose. This equalizing hose prevents the build-up of pressure in the fuel tanks, thus reducing the work and time required to transfer the fuel, and saves the vapors that would be wasted under the old procedure. Every supply tank should be constructed for handling propane.

The principal contribution that the liquefied petroleum gas industry can make to the enhanced use of its fuel for flame cultivation will be providing adequate, proper storage facilities and transfer equipment, that will enable operators to refill in a short period of time, say 15 minutes, equipment tanks, without great loss of gas. That

Practical Operating Assistance

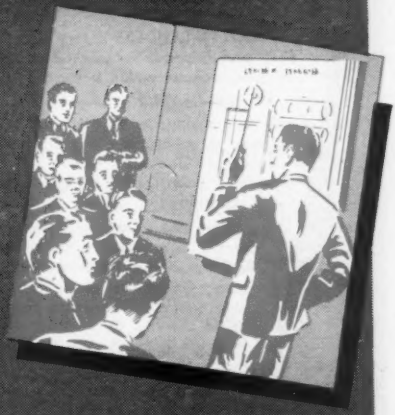
AVAILABLE TO CONTRACT CUSTOMERS—

Phillips BUTANE PROPANE



A periodic review of your plant problems by a Phillips engineer is a vital service for safety and operating efficiency.

Sales, Safety and Operating meetings are conducted by Phillips trained specialists whose occupation is to study and help improve your type of business.



Phillips technical manuals and bulletins keep your organization posted on improvements and up to date distribution methods.

PHILLIPS PETROLEUM COMPANY

PHILGAS DIVISION — BARTLESVILLE, OKLA

DISTRICT OFFICES IN NEW YORK, CHICAGO, ST. LOUIS, PHILADELPHIA, AMARILLO DETROIT, MILWAUKEE, KANSAS CITY, ATLANTA, SHREVEPORT, HIBBING, DENVER

THE WORLD'S LARGEST MARKETER OF LIQUEFIED PETROLEUM GAS

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ROTARY LIQUID LEVEL GAUGES

SELWYN-LANDERS Rotary Liquid Level Gauges provide an easy and dependable method of checking the liquid Butane-Propane volume within storage or mobil tanks.

Employing the general principle of the vertical Slip Tube Gauge, commonly used to indicate the liquid level in L.P.G. bottles by means of a slight discharge of fluid through a vent, the Rotary Gauge consists of a bent tube rotated within the tank by an outside control handle—readings being observed directly in percentage on a graduated dial.

Selwyn-Landers experience in building Rotary Gauges dates back to those originally produced. Tens of thousands are in daily service rendering reliable trouble-free operation. S-L Rotary Gauges are made of the same fine quality and workmanship typical of the entire line of Selwyn-Landers L.P.G. Equipment.

S-L Rotary Gauges are available for use in cylindrical or spherical tanks—side, upper quarter or end connected. Specify SELWYN-LANDERS products for the finest in quality.

ROTARY GAUGES
FILLER VALVES
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KEROTEST VALVES
FIXED LIQUID LEVEL GAUGES
VAPOR RETURN VALVES
SLIP TUBE GAUGES
LPG REGULATORS, and
MANY OTHERS

DESIGNERS AND MANUFACTURERS OF L. P. G. EQUIPMENT

SELWYN-LANDERS CO.

4709 EAST WASHINGTON BLVD. LOS ANGELES 22, CALIFORNIA

one move will do more for the furtherance of your new summer business than any other one thing.

The common practice of filling flame cultivator tanks in 1946 resulted in the farmer losing about 10% of his day's fuel consumption by virtue of the long time taken in filling while burner valves were open to permit vapor escape. With a 100-gallon per day load, about 10 gallons of fuel are lost in refueling.

In trying to secure approval of the Sizz-Weeder throughout the country, we have found some state regulatory bodies to be harmful to the widespread use of flame cultivation. These state authorities have attempted to revise old rules and requirements laid down for installation of household equipment to apply supervision over assembly and service of an outside, farm unit.

By making it obligatory that any man assembling or servicing the Sizz-Weeder, a machine that comes into a state knocked down, be licensed, pass written and oral examinations, carry special insurance, etc., not only on himself but on all members of his crew, per unit cost for selling machines has been prohibitive. In one instance, the sale of four or five machines entailed fees of $535.

The flame cultivator is both a liquefied petroleum gas appliance and a farm implement; there has been and will be plenty of confusion as to servicing, handling and selling of the unit as one or the other. This is one all-important question upon which there must soon be a meeting of minds. It may be that with the clearance of validity of patent, many of the present difficulties will be overcome; but it is something we must be thinking about. If Underwriter Laboratory approval were sufficient to allow for operation, a nation-wide unanimity of regulations would accelerate Sizz-Weeder utilization.

Among the manufacturing problems that directly affect the liquefied petroleum gas dealer is that of type of burner. Under some conditions the liquid burner does the superior job, and under others, the vapor burner. Grade of fuel, contamination, etc., are the only explanation we have for this to date.

Pressure Control Important

Within the use of vapor, we need also to know what is the best and most economical method of vaporization. Even using the most efficient burners available, we feel fuel consumption at the present time to be excessive. Fuel consumption varies with operating pressures, and these in turn vary with crop size, weed and grass growth. Part of the answer to timeliness of operation lies in the flame's being under perfect control and accurately directed into the crop row with pressure variation to accomplish the job. As the season progresses, efficient Sizz-Weeding is dependent on the timeliness of the operation, tractor speed and the constant effectiveness of the burner or burners used.

The results of using the Sizz-Weeder during 1946 in such crops as corn, peanuts, lima beans, car-

rots, blueberries, flowers and nursery stock, are indications of its broad use in the future. The process is gradually gaining national acceptance and the supplying of liquefied petroleum gas products in this broad field becomes more and more attractive to you as distributors.

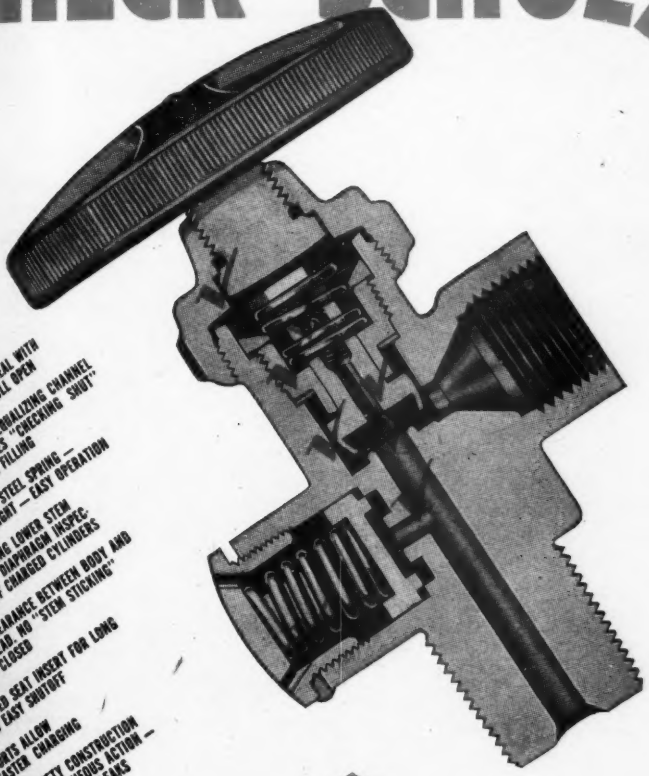
The flame cultivation load always comes at the time when your sales are low. The liquefied petroleum gas distributor that sells as much gas in the summer as he does in winter will be in an ideal position to secure a more satisfactory and profitable product supply contract from the petroleum company with which he deals.

The Sizz-Weeder is by no means an implement adapted solely to large plantations, as some believe it to be. It has proven itself to be an economical tool in acreages of as small area as 50 to 100 acres for field crops; and even smaller acreages of highly specialized crops such as vegetables, etc. The smaller sizes of one and two-row machines can be used on any farms where a tractor cultivator is practical.

In most cases where a farmer has used the Sizz-Weeder during 1946, he is contemplating adding one or more additional units to his operations this coming season. However, he is reluctant to purchase this equipment unless he can be assured of adequate fuel supply,

The "Sizz-Weeder," designed to build up the summer load of the B-P Gas dealer and distributor, and increase production of the farmer.

CHECK SCHOENBERGER VALVES


POSITIVE SEAL WITH VALVE FULL OPEN
PRESSURE EQUALIZING CHANNEL ELIMINATES "CHECKING SHUT" DURING FILLING
STAINLESS STEEL SPRING — LIGHTWEIGHT — EASY OPERATION
BACKSEATING LOWER STEM PERMITS DIAPHRAGM INSPECTION OF CHARGED CYLINDERS
AMPLE CLEARANCE BETWEEN BODY AND STEM HEAD. NO "STEM STICKING" WHEN CLOSED
TIME-TESTED SEAT INSERT FOR LONG LIFE AND EASY SHUTOFF
LARGER PORTS ALLOW 30-35% FASTER CHARGING
SIMPLIFIED SAFETY CONSTRUCTION ASSURES INSTANTANEOUS ACTION — PREVENTS PREMATURE LEAKS

The Schoenberger Valve eliminates the difficulties experienced with the conventional propane cylinder valves and embodies the latest operating improvements. Specify Schoenberger for long trouble-free service.

Approved by Underwriters' Laboratories Inc.

THE W. J. SCHOENBERGER CO.

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storage facilities, and transfer equipment.

Perhaps the following example will give you a clearer picture of the tremendous sales volume that can be secured through flame cultivation:

The minimum fuel a 4-row Sizz-Weeder will consume, used only 10 hours per day, 5 days per week and 8 weeks per year, is 4800 gallons of fuel. On many plantations, these machines operated 20 weeks with a total consumption of 16,000 gallons.

The New Holland Machine Co. is anxious to cooperate with the liquefied petroleum gas industry in solving the problems which we are facing. It is our plan to produce an efficient, reasonably-priced machine that will assist you materially in making your future expanded summer gas loads a reality. We are endeavoring to solve the difficulties that were encountered during the 1946 under field operating conditions. The extremely wet season in the rain-grown areas of the Cotton Belt brought to light several things which must be changed. These are now receiving the attention of our engineering staff.

The initial tests of 1946 on corn, truck crops, nursery stock, as further developed in 1947, will also furnish us additional material for machine improvement.

The many uses of flame in agricultural operations, as we foresee them, are too numerous and varied to be discussed at this time. Suffice it to say that the demand for liquefied petroleum gas in the field of farm culture will in the future far exceed some of the markets you are now supplying; and with this an achieved objective, the summer business of the liquefied petroleum gas industry will have come of age.

Florida City Levies 10% Tax On LP-Gas Sales

An ordinance levying a 10% tax on utility bills received final approval of the city council of St. Petersburg, Fla., but a movement was begun to force it to a vote of the people.

After the council passed the ordinance on second and third readings, Ray Price, a former city employe, announced that he would head a citizens committee which will circulate petitions for a referendum on the tax.

If the referendum move fails, St. Petersburg consumers must begin paying tax from Oct. 1. City officials expect it to raise some $300,000 a year for a postwar improvement program and plan to keep it in effect for five years.

The tax will be collected from users of electricity, local telephone service, metered water, and metered and bottled gas. Gas and water taxes will be collected on city bills; the others by the private companies giving the service.

The council voted down requests by dispensers of bottled gas to be excluded from the levy when City Attorney Runyon said such exclusion might invalidate the whole tax ordinance.

The bottled gas dispensers had maintained that their product was not a utility but merely a commodity sold by the pound or other unit.

A utility tax which includes bottled gas has also been passed by the City Commission of Stuart, Fla. This makes a total of 30 Florida communities which have passed utility taxes on butane-propane users.

Spotlight

ON THE GRIDDLE TOP

More Western women use WEDGEWOOD than any other gas range, and one reason is WEDGEWOOD'S popular griddle top, which adds 50% to actual cooking top facilities. The griddle is of chrome plated cast metal, ideal for hot cakes, eggs, bacon and many other delicious foods. It drains grease into special removable drawer, and is quickly removable for easy cleaning. Burner is self lighting.

MODERNS PREFER GAS

WEDGEWOOD LEADER IN THE WEST

JAMES GRAHAM MFG. CO.

LOS ANGELES • GENERAL OFFICES & FACTORY, NEWARK, CALIF. • SAN FRANCISCO

Air-Conditions Broiler Houses With Butane

By RUEL McDANIEL

S. L. LANIUS, manager of Twin Oaks Broiler Plant, near Beeville, Texas, has belied an accepted truism about poultry production in the hot-climate South and Southwest. He has demonstrated that broilers may be produced profitably in this section 12 months of the year, contrary to the accepted practice of eliminating production entirely in summer and cutting down during the coldest weeks of the winter.

His butane gas system has been a real factor in making this profitable year-round broiler production possible.

With only one 280-gallon tank, Mr. Lanius uses gas in all eight of his 20′ x 36′ broiler houses; he uses it to heat a steam tank for cleaning and sterilizing the equipment in the poultry houses, and he uses it in his own home, on the premises for cooking and heating.

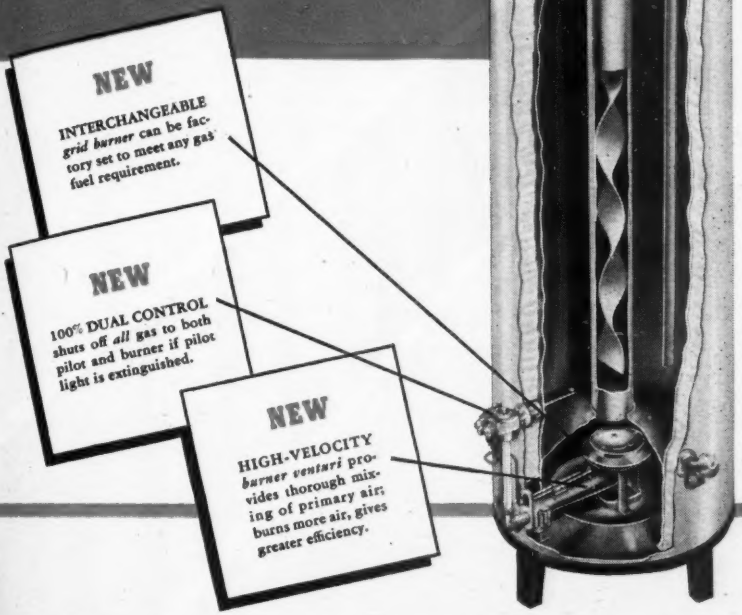
No heat is needed for the broiler houses in summer, and attic fans are used to circulate fresh air to keep the growing chicks from over-heating. In winter, however, and through the spring and fall months, heat is needed and this is supplied from individual gas burners in the attic of each broiler house.

The burner is situated so that the same fan which circulates cool air in summer may be utilized to distribute the warm air throughout the house in winter. This enables Mr. Lanius to keep all houses properly heated, without the use of special insulation, on the coldest days of winter. He regulates the amount of heat simply by turning up or down the burners on the individual attic units.

One of the most vital factors in

Butane Gas makes it possible for Texas broiler plant to clean and sterilize all equipment with live steam.

NOW...
100% safety
perfect combustion
on ALL types of gas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INTERCHANGEABLE *grid burner* can be factory set to meet any gas fuel requirement.
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100% DUAL CONTROL shuts off *all* gas to both pilot and burner if pilot light is extinguished.
NEW
HIGH-VELOCITY *burner venturi* provides thorough mixing of primary air; burns more air, gives greater efficiency.

Find out about this handsome new Series 30 by Rheem, America's greatest builder of water heaters. Additional fast-selling features include Rheem hot-dipped galvanized tank, full 1½-inch insulation, double access doors, and wear-resistant baked enamel finish. AGA approved. Sizes: 20, 30, 40 gallons. Write Rheem today for full details. Address 570 Lexington Ave., New York 22

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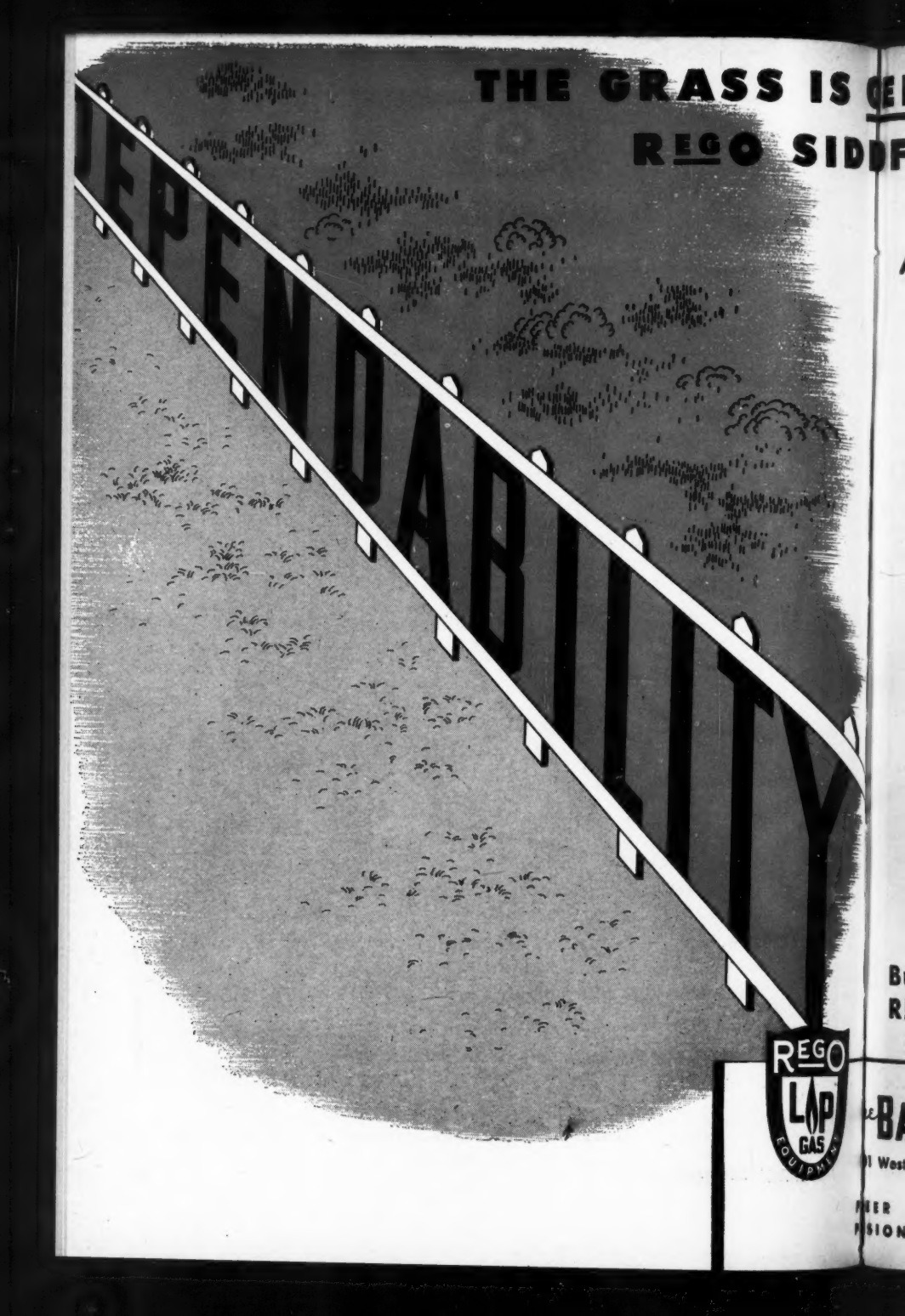
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REGO
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GAS
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DOF THE FENCE!

Approved REGO Equipment Builds
Sales and Keeps Customer Good Will

Foresighted LP Gas distributors and dealers are not allowing present shortages to stampede them into using substitutes for RegO equipment. They know that the RegO line has met the acid test of years of performance in the field. They also know that RegO's greatly expanded production facilities are working overtime to meet the tremendous demand for RegO dependability and performance.

LP gas distributors and dealers who handle the RegO line have learned that RegO pays real dividends in customer satisfaction, and lowered service costs, and that RegO equipment is recognized as having the highest safety rating—a major factor in protecting them against possible accidents, with their ensuing costly claims. RegO's dependable performance eliminates the multiplicity of off-hour service calls, and the long, trouble-free life of RegO equipment insures customer satisfaction that is a real aid in increasing gas loads.

The wide range covered by the RegO line means that no matter what your installation problem, there is dependable RegO-designed equipment to meet your specific needs.

Business is Better on the REGO Side of the Fence

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LP GAS EQUIPMENT

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Restaurant
Gas Range
No. 83

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FLEXIBILITY!
Four individually controlled burners for griddle and broiler.

CONVENIENCE!
Automatic lighting for each of the top burners.

CONVENIENCE!
Removable open-grate sections over each top burner.

SOUND DESIGN!
Oven design provides thorough heat circulation.

LONG LIFE!
Oven door springs located out of the high heat zone.

CONVENIENCE!
Wide high shelf for plates and serving dishes.

STRENGTH!
Strong all-steel construction to withstand hard service.

GARLAND

THE TREND IS TO GAS
FOR ALL COMMERCIAL COOKING

A Product of Detroit-Michigan Stove Co., Detroit 31, Michigan

growing broilers at a profit is holding down the mortality rate of chicks. Sanitation is the keynote of maintaining a profitable mortality rate, because disease does not spread in clean poultry houses.

Mr. Lanius uses his butane system to eliminate any danger of contamination or infestation through lack of sanitary conditions, by using gas to generate live steam for cleansing purposes.

Dropping boards from all broiler "batteries" are removed once a day, brought outside the houses and placed on special metal "horses," where they are showered with steaming hot water for several minutes. This steam bath kills all bacteria and so thoroughly cleans the metal boards that there is not possibility of any bacteria remaining alive to spread to the chicks.

He credits this steam cleaning system for holding the mortality rate of his chicks to less than 5%, and for chicks bought at a day old that is excellent, as any poultryman knows.

The system was purchased from Howard Hardware Co., butane dealer in Beeville, and the company aided Mr. Lanius in laying out his system and working out the details necessary to extend the service to all units.

Albany, Ga., Will Install Propane-Air Gas Plant

A contract has been awarded to Stacey Dresser Engineering, Cleveland, Division of Stacey Bros. Gas Construction Co., Cincinnati, for the design and installation of a propane-air gas plant for Albany, Ga.

This plant will produce 312,000 standard cubic feet per day of 550 Btu propane-air gas and is designed at other lower capacities so as to meet variable peak winter load requirements.

Complete unloading and liquefied propane storage facilities will also be provided. The generating equipment will include a Btu recorder and controller.

Green's Fuel distributors in the Carolinas and Georgia met in Greenville, S. C., August 23-24 (see BUTANE-PROPANE *News*, October issue, Page 140) to discuss industry problems.

Bulk Storage Tanks

Storage is the problem at hand and the consumer must help solve need by installing larger tanks. Safety practices. Standardization needs. Price.

By ERIC A. FLASCHAR*
Dresser Industries, Inc., Cleveland

LIKE many other industries in the postwar period, the LP-Gas industry is entering into a new era. Large quantities of propane and particularly butane went during the war period into the production of high octane gas and into the synthetic rubber program. Today these industries continue to consume large quantities of these hydrocarbons and, in addition, municipalities and utilities are expanding the use of LP-Gas at a rapid rate. Gas cooking and heating facilities are being provided where none were available; gas-producing facilities which had been overtaxed by wartime demands are being replaced, and utilities are augmenting their present inadequate plant capacities and natural gas supplies.

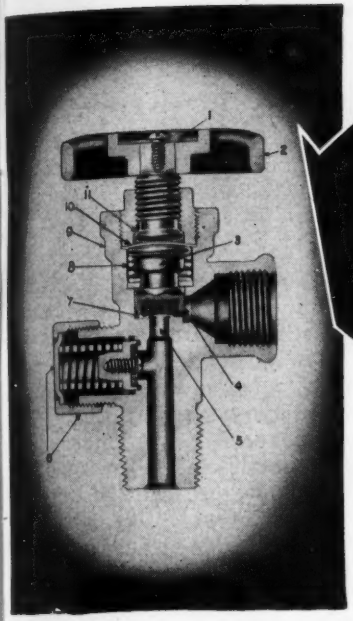
LP-Gas sales for domestic use increased again in 1945 by approximately 25% over the all-time high figure of 1944, which was approximately 450 million gallons. This gain indicates that the distributors are finding ways to overcome various difficulties in marketing a growing production to meet a growing demand.

Manufactured gas companies are using an ever larger amount for increased distribution and for standby gas; they increased their purchases by 25% from 48 million gallons in 1944 to 60 million gallons in 1945, and this year also the natural gas utilities are appearing as large purchasers.

Utilities Use Propane-Air

Many of the gas utilities supplying natural gas have found that they can mix up to 50% of propane-air with their natural gas to augment their needs. Since a higher heating value of propane-air gas is used for interchangeability with natural gas, the actual increase in capacity to meet winter peaks may be as high as 150% of their normal natural gas supply. Thus the natural gas utilities have found an effective method of expanding their facilities to meet their expanded demand, and have become large LP-Gas users and large bulk storage plant owners. Since all of these old and new uses have peaks occurring during the winter months, this rapid growth increases the

* A paper read at the National Butane-Propane Association convention, Chicago, Sept. 24.



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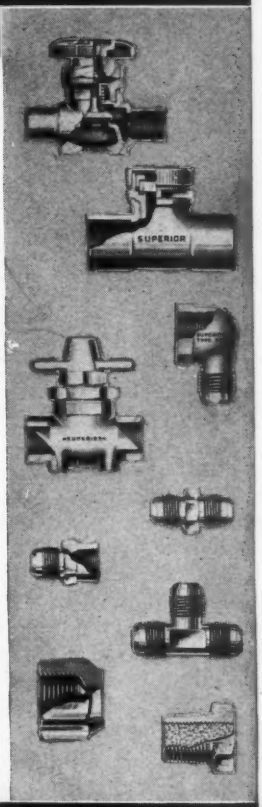
SUPERIOR LP-GAS CYLINDER VALVES are listed as Standard and for Re-examination Service by Underwriters' Laboratories, Inc.



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10. Multiple metal diaphragm forms positive pressure seal
11. Metal-to-metal backseat when valve is fully opened

There's a complete line of SUPERIOR cylinder, globe, line and angle valves—diaphragm packless and wing cap—in flare or sweat sizes; sight glasses, suitable for any normal LP-Gas pressure; fusible metal plugs; and flare fittings—*listed as Standard by Underwriters' Laboratories, Inc.*

*Customer may specify special printing, and own trade name (special to order).

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ERIC A. FLASCHAR

eminent role of bulk storage plants in the LP-Gas industry.

The variation in size of bulk storage plants is very great, indeed. From the one storage tank plant required by the small bulk distributor, to the 100 tank storage plant required for natural gas distribution systems, we find storage plants in all sizes to serve the larger bulk distributor, the LP-Gas producing plants and the LP-Gas standby plants for manufactured gas utilities.

When the Philgas Division of Phillips Petroleum Co. last summer built a propane standby plant consisting of 15 30,000 gallon storage tanks and the necessary vaporizing equipment for the gas department of the city of Memphis, Tennessee, it represented the largest bulk storage plant conceived, but today we are building several plants of considerably larger capacities, and there is no doubt that many more and larger plants are contemplated and will be built. These plants, which will be operated a relatively few days of the year during peak demands, must store a great part of their annual requirements for immediate use.

There is not, and will not be for years to come, a scarcity of LP-Gas and the rate at which it can be consumed nationwide depends mainly on the transportation and storage facilities available. The annual demand for LP-Gas must flow evenly throughout the entire year in tank cars, barges or pipelines to the users, who must store such amounts as are required to meet their daily and seasonal peak loads. Were the distributor to store the peak requirements for the seasonal demand, he also would have to have the extra transportation facilities to convey it.

Considering the large investment which the distributor would have to tie up in storage and tank cars, it can readily be seen that he could never operate efficiently; and therefore the consumer must shoulder part of this burden by providing his own storage and enable the distributor to operate with the minimum amount of transportation facilities.

As an example for sizing a bulk

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storage plant, consider the problem of a gas utility using LP-Gas for meeting peak load demands. They must ascertain from their past performance and expected load, the total LP-Gas to be added to the system during the maximum demand season, the period of time during which they expect to operate their peak load facilities, and the rates of out-put required during these periods. Comparing these figures with the best shipping schedules of LP-Gas available to them during that same period, the amount that they must have in storage at the beginning of the maximum demand season is readily obtainable.

Of course, the users do not wish to provide more storage than absolutely necessary, but don't let them forget that for every bit of seasonal demand storage which the distributor provides, there must be extra tank cars.

Needed for Peak Loads

For the quantities of peak load gas involved, there is at present no alternative for the gas utilities than the use of LP-Gas and bulk storage plants. Each 30,000 gallon tank represents a tremendous storage of Btu's that can be put into the system at a moment's notice. Assuming 25,000 gallons of propane in a tank, this would be equivalent to 2 billion, 300 million Btu's, or equivalent to 2 million 300 thousand cubic feet of 1000 Btu natural gas. Four to five such storage tanks are equivalent to the largest gas holders ever built in this country, but when requiring 10 times this quantity of gas, it becomes prohibitive to install gas holders which serve so well for the lower capacities, and the bulk storage of LP-Gas offers the only solution.

It is interesting to note that the investment in the bulk storage plant represents the major portion of total cost of a propane-air plant. The actual regassification rate does not affect the size of the bulk storage plant but influences the size and cost of vaporizing and other equipment associated with the plant. It is only the total sendout required that is directly associated with the bulk storage plant size. Based on several installations that we are presently building, we can give you the following comparative cost figures:

Percentage of Investment

In a propane-air plant that is discharging into a natural gas transmission system at 50 psig, producing the equivalent of 12 million cubic feet of natural gas per day during eight peak days, and for which 75% of the total sendout of LP-Gas is purchased in the summer months, the bulk storage plant represents 67% of the total investment.

For a plant under similar conditions, producing the equivalent of 24 million cubic feet per day, 75% of the total investment cost is in the bulk storage plant. And for another plant producing the equivalent of 48 million cubic feet of natural gas per day, 80% of the cost is in storage vessels.

Normally it would be anticipated that as the plant size increased, the unit cost would decrease within definite limitations. While this

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is true for the propane-air plant, exclusive of storage, the cost of storage itself is always a linear function. Thus, if a plant requires 10 or 50 tanks, the unit storage cost remains essentially unchanged regardless of the total number of gallons of propane that are stored.

Must Keep Good Safety Record

As the size of bulk storage plants increases, the hazards involved multiply. The National Board of Fire Underwriters has set up a safety code which should be strictly adhered to by all concerned. The LP-Gas industry has a good safety record, and it is up to all of us to maintain this performance as laxity would undoubtedly impose more stringent regulations. It is extremely important that all vessels for bulk storage plants be built in reliable shops and that they be inspected and tested at the time of manufacture. It is also of the greatest importance to incorporate all the safety features specified by the code in equipping these tanks.

In the very large bulk storage plants, we have incorporated additional safety features that would not normally be encountered in small tank farms, and an endeavor has been made to incorporate as much flexibility as possible. Groups of tanks can be blocked off in case of fire, and the piping between tanks has been looped so propane flow could be taken in either direction from any group of tanks. Provisions have been made to transfer the contents of any one tank to another if so desired.

Should a leak occur, or a fire hazard endanger a certain tank, its contents can be transferred in a relatively short period of time by means of a liquid pump to the other tanks. The quick transfer of propane by means of a pump is a problem in itself, since the propane in the storage tank is under its own vapor pressure, and friction encountered in the suction line will vaporize propane, causing operating difficulties.

Rather than elevating the tanks to provide the necessary positive head, which is an expensive and cumbersome method, or locating the pumps in a pit, we have solved this problem by choosing vertical pumps encased in the ground with vertical mounted explosion proof motors.

Need for Standardization

With the trend to large bulk storage plants, there is a greater need for standardization. The National Board of Fire Underwriters has been a great asset in the standardization of LP-Gas equipment. At present a 30,000 gallon water capacity tank is the largest single container permissible for LP-Gas storage. Since the capacity and the working pressure are thus established, there is no reason why there should be variations in the design of these vessels.

It would be advantageous to have all these tanks built to standard dimensions by the various manufacturers so that they would be interchangeable. For a bulk storage plant requiring an appreciable number of tanks, the production of more than one tank fabricator must be used to construct the plant economically; unless all the tanks are exactly alike, individual foun-

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dation design and special piping problems are introduced. This association of ours should undertake the task of standardization and thus benefit the entire industry.

Looking into the future, it should be anticipated that the cost of LP-Gas may rise. Although new refinery operations such as cycling plants have increased the amount of LP-Gas available, the demand has also rapidly increased. The use of butane for fuel purposes has already become secondary to its use for high octane gasoline. Other users such as the manufacturers of synthetic rubber and the chemical industries can afford to pay higher prices than the LP-Gas industry, and as their demand increases, the price for butane will further increase. This leaves those industries using LP-Gas for fuel purposes in a position where the cost of their fuel will mount.

Must Keep Cost Down

If the gas utilities are to continue to use LP-Gas, something must be done to circumvent the rising cost. Obviously they will not be able to control the cost of the fuel, and their only out is to reduce the cost of their plant. It was previously indicated that storage represents an investment of 67% to 80% for the plants considered, and it will therefore be necessary to find a less expensive method for storing. If the industry is to continue to grow, we likewise must grow with it. It is with this thought in mind that large volume storage units are being introduced for your consideration.

By large volume storage units, we had in mind storing in spheres up to a diameter of 60 feet. This would be equivalent to 34 30,000 gallon tanks. Propane could not be stored at its normal vapor pressure but would have to be stored below the maximum design pressure of the vessels.

Equipment Needed

Fifty psig working pressure for this size spheres and spheroids are not uncommon. Such spheres have proven to operate successfully for this size spheres and spheroids would, therefore, be merely an extension of this application to propane and butane. The system would require the spheres for storing the liquid, a compressor for compressing the vapors, and a vapor condenser cooled by circulating water.

Using large volume storage would eliminate an extensive amount of inter-connecting piping. Each tank is normally equipped with a pressure gage, thermometer, safety relief valves, excess flow valves, and a liquid level indicator; in place of having 30 or 40 sets of controls, one set would be required; it would also simplify all pumping problems. Unloading propane from tank cars would be a very simple operation. Since the liquid in the sphere is at a reduced pressure, the liquid in the tank car would flow by difference in vapor pressure to the sphere. When the tank car is emptied of its liquid contents, the car will be stripped of its vapor content down to the operating pressure in the sphere.

Assuming that the propane were stored in this type of vessel at 40 psig, the corresponding tempera-

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ture for the vessels and its contents would be 20° F. It would, therefore, be necessary to continuously refrigerate the sphere. Propane vapors would be removed, compressed up to 200 psig, and then condensed in a water cooled condenser. The condensed high pressure liquid would be flashed to the storage pressure and then returned to the tank. The sphere would be insulated with cork or any other suitable insulating material.

Requirements Set Out

On the basis of using three inches of cork insulation, and an ambient temperature of 100° F, it would require about a 20 HP compressor, a condenser with approximately 200 square feet of surface, and 25 gpm of circulating water. This represents the extreme conditions for operating the system. For a major portion of the year, the ambient temperature would be considerably lower and the heat flux into the tank would be reduced, requiring less refrigeration.

In comparing the cost of this type of storage with that of a tank farm of standard 30,000 gallon tanks, it would be necessary to include the initial investment in the sphere, its insulation, compressor and heat exchanger, and also the operating costs of utilities.

A 60 foot diameter sphere complete with refrigerating equipment will cost approximately $125,000. The annual operating charges for power and supplies would be about $2100 per year, and would have a present worth of $30,000 based on a 20 year operating period. Thus the total cost of large volume storage unit would be $155,000 as compared to $300,000 for an equivalent tank farm. There will also be an appreciable saving in land requirements, which has not been included in this comparison.

It is to be understood that in considering large volume storage, the principles involved can also be applied to smaller diameter spheres replacing from three to four 30,000 gallon storage tanks. For the smaller size spheres, the LP-Gas could be stored at higher pressures and the actual amount of refrigeration and operating costs required would be reduced. Less insulation would be used, and there would be a considerable portion of the year when no refrigeration at all would be required. A careful cost analysis comparing the initial investment in the sphere versus operating cost would determine the most economical pressure at which to store.

Before this type of storage can be accepted by the industry, it will require careful investigation by all concerned. The matter must also be presented to the National Board of Fire Underwriters for its scrutinization, and approval of the larger storage volume in a single vessel.

This method of storing will also require additional safety precautions. Spheres should be located further away from any other operating equipment than storage tanks are at present, and a definite zoning law should specify the minimum fixed distance from the nearest inhabited building. If and where necessary, dikes large enough to confine the entire contents of the sphere could be employed.

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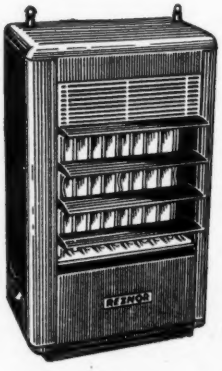

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• *This department is a monthly feature to stimulate thought and to give operators basic industry facts. Clip out for your notebook or file in a standard, 3-ring, loose-leaf binder. Sources of information: The Bottled Gas Manual, Handbook Butane-Propane Gases.*

Questions	Answers
1 Why is electricity the chief competition of the LP-Gas industry?	The electric industry is actively after the same field as the LP-Gas dealer, namely, the hundreds of thousands of home owners who are able and willing to install modern home appliances.
2 In what way is the electric industry a help to the LP-Gas dealer?	The electric industry is generous in its advertising programs for the modern kitchen and the modern appliance. This advertising has created a desire in thousands of home owners to better their living standards and has raised the appliance requirements from something to get by with to something to be proud to own and use.
3 What electrical appliances have done the most to increase LP-Gas water heater demand?	The electric washing machine, particularly the home laundry type, and the electric water heater. The first two require large volumes of very hot water and as the electric water heater is one of the poorest performing electric appliances in the point of recovery speed, flexibility and competitive cost, the LP-Gas water heater has had a chance to demonstrate its superiority.
4 What other big help is given the LP-Gas dealer in the promotion and sales of the modern kitchen?	The advertising campaign of the American Gas Association and the gas appliance dealers and the gas utility companies which are stressing the modern gas kitchen and the advantages of gas, for the four big uses in the home.

5

Why should electric competition be considered seriously?

Electric competition is competition with good merchandising. It will be able to sell a certain percentage of the potential market not on performance or economy but just by good salesmanship and advertising.

6

Why is electric competition good for the LP-Gas dealer?

Electric competition is after the cream of the business and when it is able to get a share through salesmanship in the LP-Gas dealer's territory, it is bound to get under his hide and show him that many people are looking for appearance and convenience and to them the monthly cost of fuel or energy to operate the modern home is secondary.

7

Is there any point in the electric presentation that forces the LP-Gas dealer to apologize for his product or performance?

No. In all four fields, cooking, water heating, refrigeration and space heating, LP-Gas surpasses electricity in performance and has equivalent quality merchandise to offer.

8

Is there any place in the United States where LP-Gas can't compete on a prices basis with electricity for home use?

There are a handful of municipally operated plants located immediately adjacent to hydro-electric power where prevailing rates would make competition hard, but we know of no rural area where LP-Gas won't do a better job and more economically.

9

What is the fundamental reason that makes it practically impossible for electricity to be served as economically as LP-Gas?

Electricity cannot be stored at the point of use. Where we have to worry about balancing our winter and summer load, they have to worry about balancing their hourly peak loads.

10

How can the LP-Gas dealer compete with the electrical industry?

By remembering that LP-Gas is better than electricity for all four domestic uses and selling that idea.

SUBJECTS TO BE COVERED IN FORTHCOMING ISSUES:

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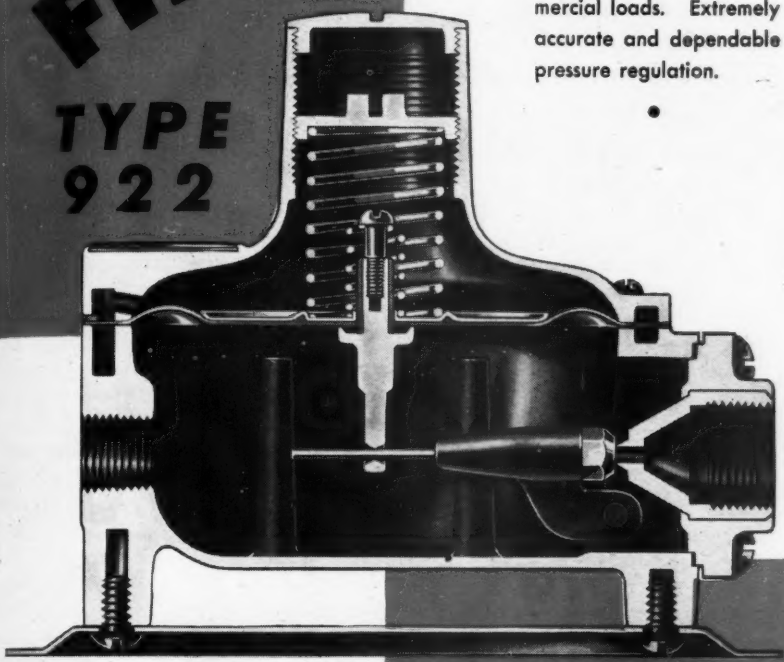

SPECIFICATIONS

CAPACITY — Rated capacity 120 cu. ft. per hour.

SETTING — 11" water column at 30 cu. ft. per hour, 100 lbs. inlet.

RELIEF VALVE — Integral type, set and sealed for 1 lb.

INLET CONNECTION — 970 POL, ¼" inverted flared tubing connection, ¼" pipe thread or ⅜" pipe thread.

OUTLET CONNECTION — ⅜" and ½" IPT.

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AS I write these lines there is a flash of nostalgia caused by a process of evolution which is fast making inroads upon our American railroads and which will deprive future generations of American boys of much of the thrill and romance of railroading.

What boy's heart has not jumped as the monster Pacific or Mountain type of steam engine has snorted by, a plume of steam trailing back over it from its popping safety valve and the crash of its whistle being thrown back by the dense forests along the right of way? The air whistle, which sounds so much like a fish peddler's horn, is but a cheap imitation provided by the diesel-electric locomotive, and the rhythmic thumping of its diesel engines accompanied by an acrid smell leaves nothing for the admiration held by youth for the chugging monsters that still are hauling the majority of America's trains.

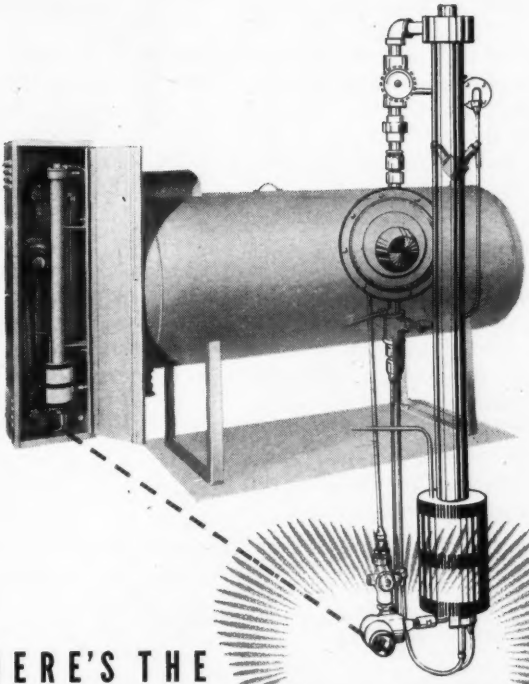
It will be a long time before these monsters are entirely relegated to the limbo of horse and buggy days, but they are definitely upon that path, and aside from our opportunity to motivate the newcomers with the fuel in which we are interested, there still remains a sizeable field for us in keeping the steel monsters shod.

I use the word "shod" advisedly, for the giant driving wheels on a steam locomotive are not one big casting, but are tired with a steel which is better suited to stand the punishment of grinding over the rails and absorbing braking strains. When these tires become worn they are removed from the driving wheels by expanding them with heat, and the new shoes are expanded with heat so that they can be slipped into place. When these steel bands cool, they shrink, and defy any force to loosen them. Sometimes, if they have been improperly applied, they will become loose on the road or even break. Then the locomotive becomes as helpless as if it had a roller bearing under that particular driving wheel.

It is obvious that in removing steel tires from the driving wheels

By C. C. TURNER

Special Representative
Butane-Propane News



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DALLAS, TEXAS

the application of heat must be to the steel tire only, and that the process must be accomplished quickly in order that heat may not be conducted from the tire into the wheel itself, thereby causing it also to expand and defeating the purpose of heating the tire. This calls for intense heat in large quantities being applied over the entire surface of the tire.

An entire railroad system has need for but one or two of these heating devices; therefore, most of them are home-made and makeshift rigs. Most of those in use depend upon oil as a fuel, and several oil blow torches similar to those used by contractors for thawing out frozen ground are fastened to a circular band which is assembled around the surface of the tire and concentric to it.

Oil Not Satisfactory

Oil as a fuel for this purpose presents the usual difficulties of generators plugging, work being sooted, and the fire hazard attendant upon fuel hoses bursting and spreading hot inflammable oil over the already oil-soaked floors of roundhouses is always present.

It was but natural that a wide-awake merchandiser of B-P Gases should visualize the superior merits of gas torches for this purpose, and experiments were started in the development of suitable burner equipment for this type of work. The first model burner consisted of a ¾" pipe burner being constructed and bent to an internal diameter of approximately 2" larger than the driving wheel tire.

Two rows of portholes were drilled on the inner circumference of this burner and the job was attempted by using a single gas orifice in connection with a conventional mixing chamber, gas being supplied to the orifice at 11" of water column pressure. It was found that the application of heat from this burner was too slow, and a second burner was built to operate at higher gas pressures. This also consisted of a pipe ring as illustrated in Schematic Drawing 1, with Barber jet burners installed at intervals of 3".

Difficulties Encountered

The trouble with this burner was that the points of heat application were too concentrated, and again the heat input was not sufficient. When the gas pressure was raised to correct for insufficient input there was trouble with the flame blowing off from the Barber jets. To have installed sufficient Barber jets to correct the condition and allow the burner assembly to be operated at a lower pressure would have made the construction of it too expensive and too cumbersome as well.

The solution to the problem seemed to lie in modifying the construction of the Barber jets so that they could successfully handle a greater input at a higher pressure and also spread the flame cross-section.

As is so often the case, the solution of this problem came partly as the result of theory and partly from baffled experimenters trying everything without apparent reason for their acts. It had been noted that the capacity of a laboratory Bunsen

The same experienced organization, augmented in strength and familiar with the practical, modern needs of the gas industry, is actively functioning.

First, to restore, as soon as adequate materials become available, the full volume enlarged production so critically needed to meet today's urgent requirements.

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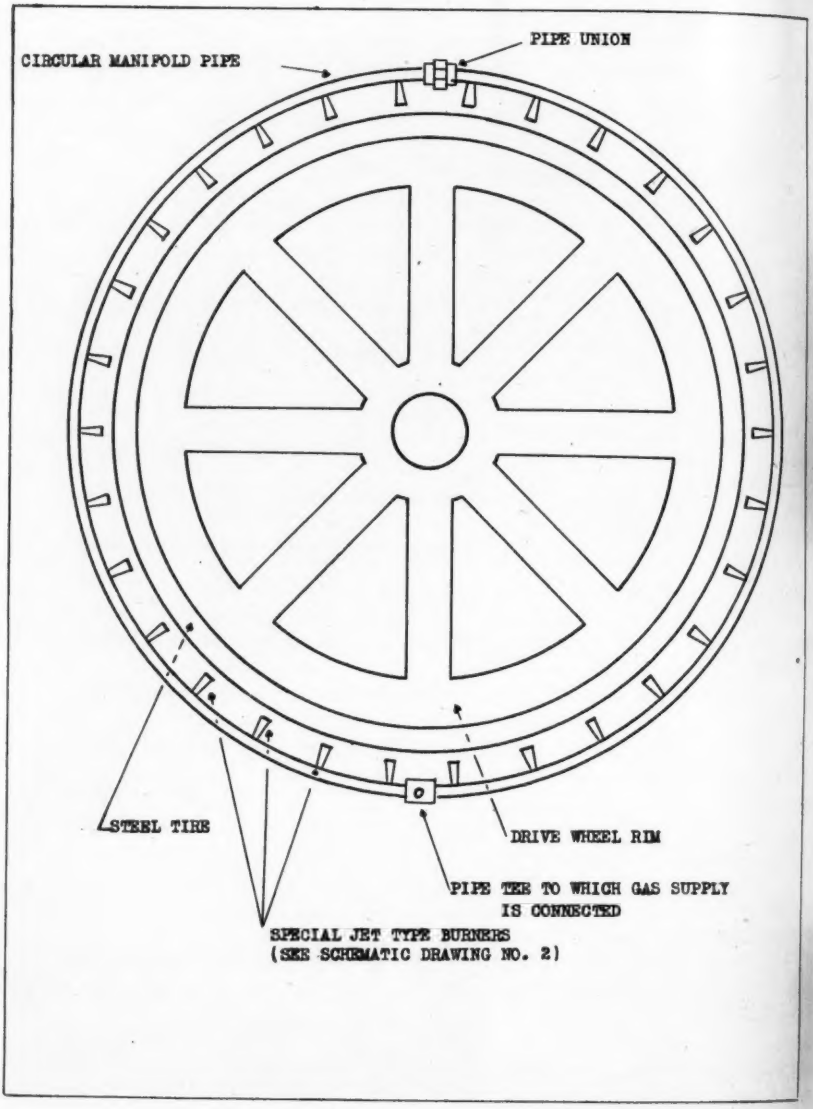
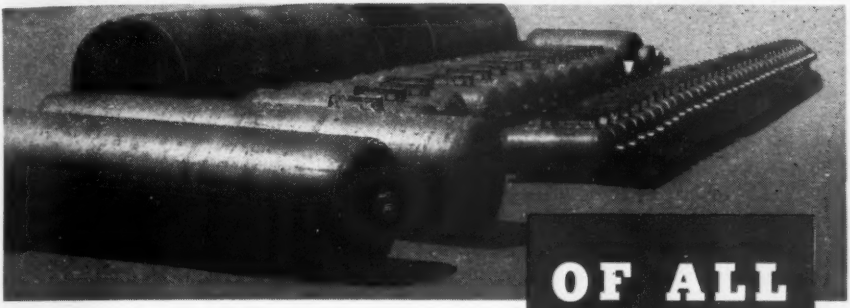
SCHEMATIC DRAWING NO. 1 ILLUSTRATING A RAILROAD GAS-FIRED TIRE BURNER ASSEMBLY


PIPE UNION
CIRCULAR MANIFOLD PIPE
STEEL TIRE
DRIVE WHEEL RIM
PIPE TEE TO WHICH GAS SUPPLY IS CONNECTED
SPECIAL JET TYPE BURNERS (SEE SCHEMATIC DRAWING NO. 2)

TANKS



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UNDERGROUND L.P.G. SYSTEMS—101 LBS. W.P.

MODEL B— 150 water gallons, 141 net gallons, 24" diameter x 82⅝" long, weight— 470 lbs.
MODEL C— 215 water gallons, 202 net gallons, 30" diameter x 77" long, weight— 586 lbs.
MODEL D— 288 water gallons, 270 net gallons, 36" diameter x 72½" long, weight— 770 lbs.
MODEL E— 542 water gallons, 510 net gallons, 36" diameter x 132" long, weight—1280 lbs.
MODEL G—1000 water gallons, 940 net gallons, 36" diameter x 239" long, weight—2150 lbs.

ABOVEGROUND L.P.G. SYSTEMS—200 LBS. W.P.

	Par. U-69 of Code Weight Pounds	Par. U-201 of Code Weight Pounds
P-1 150 water gallons, 125 net gallons, 41" diameter sphere	450	
P-2 360 water gallons, 300 net gallons, 41" diameter x 79¼" long	1195	1065
P-3 599 water gallons, 500 net gallons, 41" diameter x 122¾" long	1950	1690
P-5 1150 water gallons, 950 net gallons, 41" diameter x 222" long	3765	3065

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burner could be greatly increased by constructing the port end in the shape of an inverted bell, and crude torch burners for use in smoke houses had already been constructed which made use of this principle by merely screwing onto the end of a pipe an increasing pipe coupling.

Problem is Solved

As one of the experimenters watched the Barber jet burners blowing the flame off from the ports as a result of too high gas pressure, he happened to place a common flare nut on the end of one of them. The flame immediately settled down onto the flare nut and spread out. It remained seated upon the flare nut even when gas pressures were stepped up to as high as 40 lbs. gage pressure per square inch. The problem was then and there solved.

It only remained necessary to construct burners on this principle. One-eighth inch pipe nipples approximately 1½" long were used for the bodies of these burners. The lower end of each nipple was brazed closed and a No. 75 MTD orifice was drilled in it. Holes for primary air were drilled in the nipple as shown in Schematic Drawing No. 2. The port end was surmounted by a type NR4-86 reducing flare nut (½" flare fitting thread by ⅜" O.D. copper tubing).

Tests of the assembled burners were conducted in the shops of two railroads, and the results were highly satisfactory. The difficulty was in the cost of producing burners of this type, for a different burner assembly was required for each size of locomotive drive wheel. As an example, a drive wheel having a diameter of 60" required a ring assembly having an internal diameter of approximately 70", and such a ring required 70 of the small burner assemblies.

Labor and material costs manufacturing such assemblies in small lots ran approximately $1 for each jet burner used. A railroad having locomotives with 10 different sizes of drive wheels would require at least 10 burner ring assemblies at a cost for each ranging from $60 up to $84. Added to this was the cost of a battery installation of cylinders sufficient to take care of vaporizing requirements in the coldest weather, plus adjustable high pressure regulators, hoses, and outlet connections at one or more places in the roundhouse.

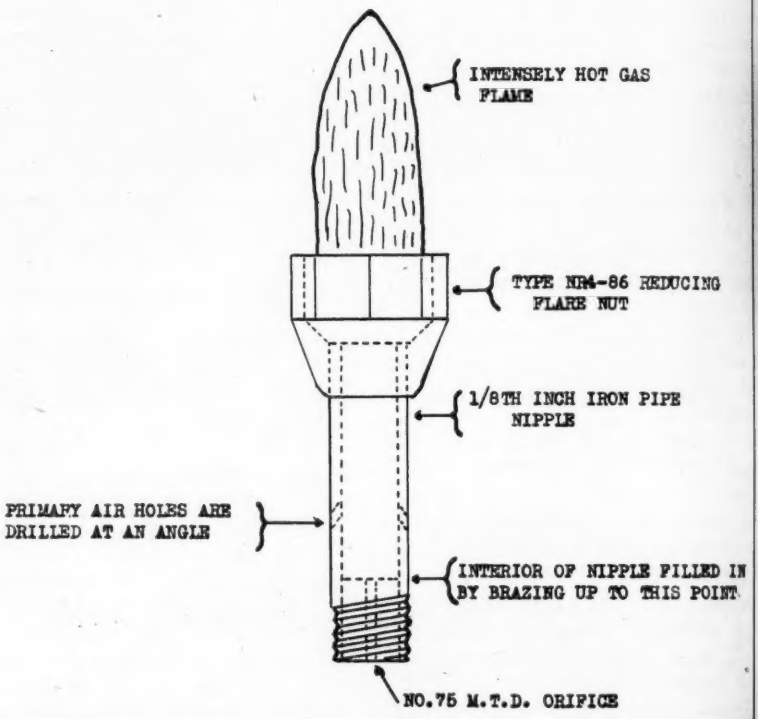
No Artificial Vaporization

This all occurred in the days when we knew little and thought less of artificial methods of vaporizing propane.

At the Rigby roundhouse at least a dozen such outlets would have been required. The installation cost in this instance would have been in the vicinity of $2000. This was in the years before the war when the railroads were feeling the need of economy. The gas company could not see any percentage in assuming a portion of the installation cost when the equipment would be used but two or three times a week, and the gas would be but some 2000 lbs. per year in the lower price brackets.

Both the railroads interested and the gas company abandoned the idea then and there, and to the best

SCHEMATIC DRAWING NO. 2 ILLUSTRATING THE CONSTRUCTION OF JET BURNERS USED IN THE RAILROAD GAS-FIRED TIRE BURNER ASSEMBLY.


INTENSELY HOT GAS FLAME
TYPE NRA-86 REDUCING FLARE NUT
1/8TH INCH IRON PIPE NIPPLE
PRIMARY AIR HOLES ARE DRILLED AT AN ANGLE
INTERIOR OF NIPPLE FILLED IN BY BRAZING UP TO THIS POINT
NO.75 M.T.D. ORIFICE

ADVANCES BASO DEVELOPMENT

A.G.A. APPROVED

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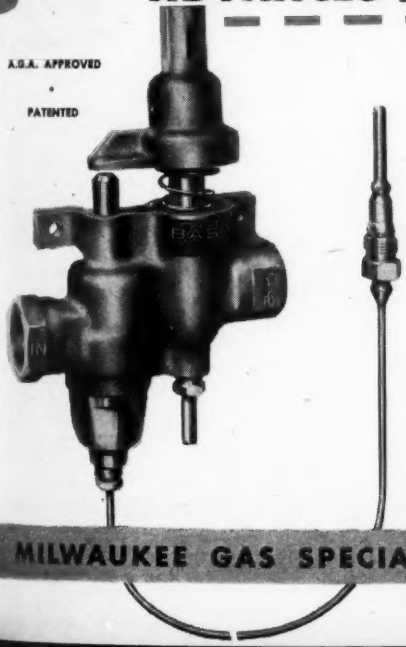
PATENTED



Research is the forerunner of performance. Without accurate scientific knowledge product performance cannot be predicted. Our own laboratory scientists painstakingly test, measure, evaluate and examine every bit of material entering into the production of a BASO Automatic Pilot. Thousands of successful performance records testify to the importance of this method of pre-testing BASO quality. The BASO Thermo-Electric Pilot is built to safeguard your gas-fired equipment against all types of hazardous pilot flame conditions.

Send for Bulletin SB 300 "Application of BASO'S"

MILWAUKEE GAS SPECIALTY CO., MILWAUKEE 3, WIS.

of my knowledge the application of B-P Gases for this purpose on American railroads has not been revived up to the present time.

One might ask why, if the application at that time was found to be impractical because of costs involved, there should be any thought of reviving it at the present time? In the first place, the financial position of American railroads is somewhat different from what it was in 1939-1940. Secondly, in quantities such equipment could be manufactured at a fraction of the cost of the original hand-made models.

There are approximately 1000 railroads in the United States with approximately 2000 shops where engine repairs are made. About 20,000 burner ring assemblies with about 1,400,000 of the small burners which go into the ring assemblies would be required to properly equip these shops. The annual gas load for this purpose alone would be in the vicinity of 4 million pounds!

This would bring in a revenue for the industry of approximately one quarter of a million dollars per year. Use of simple artificial means of vaporization could cut the cost of B-P Gas containers to but 6% of that necessary for the natural means of vaporizing from the temperature of the outside air. Instead of a roundhouse installation costing in the vicinity of $2000, there is no need of it costing over $500 if burner costs could be cut down by mass production and artificial vaporization were used. This cost would closely approximate that of oil burning equipment, operating cost would be approximately the same, and the advantages of clean, safe, and controlled heat, plus a saving in valuable time could be offered as inducements to the railroads.

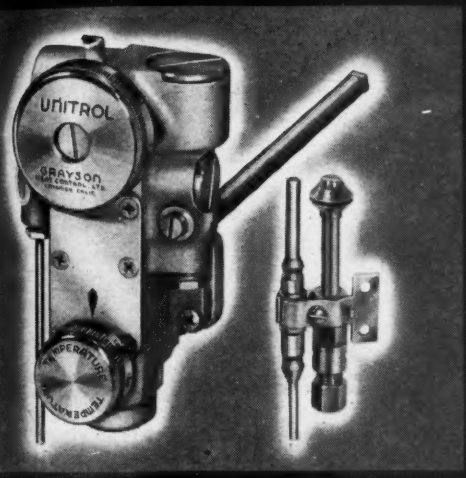
•

In the preceding chapter I said that this month I would tell you how a railroad application found a profitable application in the paper business with the Great Northern Paper Co., and this burner was the start of it all. Up at this company's large plant in Millinocket, Maine, a crack developed in one of the flywheels on a steam engine. The flywheel had to be replaced.

Now the flywheels on such engines are expanded and shrunk onto the shafts, and the method of doing this in the field has been to build a huge charcoal or coke fire, insert the flywheel and shaft assembly in it, expand the old flywheel and remove it, then expand the new flywheel and force it onto the shaft. This was a costly and time-consuming procedure, with many possibilities of error and faulty workmanship entering into it.

A wide-awake gas dealer had seen the railroad experiments and suggested application of the railroad tire burner assembly to the job. Naturally it interested the service man who had been sent from the engine factory to do the job, for at the Great Northern plant construction of the engine room prevented taking the flywheel and

NEW GRAYSON UNITROL "A"



advanced features... 3

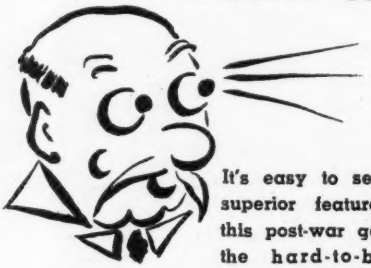
Pilot filter is built in ahead of pilot adjustment valve.

GRAYSON
HEAT CONTROL, LTD.
LYNWOOD CALIFORNIA

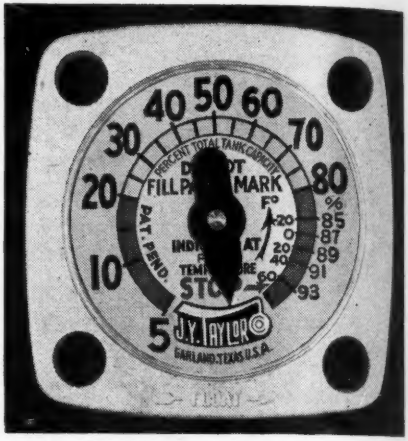
It's easy TO SEE

when you're looking at a

TAYLOR VISIBLE LP GAS FLOAT GAGE



It's easy to see the superior features of this post-war gage—the hard-to-break plexiglas, the sturdy, rigid one-piece construction of float arm, counter-weight and drive gear, the matched magnet indicator control that assures a permanently air-tight, non-misting dial chamber.



It's easy to see the dial reading too, because of the large numerals and pointer. No other gage is as easy to see as TAYLOR.

DISTRIBUTORS FOR

he BASTIAN-BLESSING *Company*

REGO

LP GAS EQUIPMENT

PRESSED STEEL TANK

Hackney

BUTANE-PROPANE CYLINDERS

GAS EQUIPMENT COMPANY, Inc.

P. O. BOX 566

2620 South Ervay « DALLAS, TEXAS

GAS EQUIPMENT SUPPLY CO.

GEC GAS EQUIPMENT COMPANY, INC.

shaft assemblies out into the open for the heating process.

It is not necessary to go into all of the details of just how the job was accomplished. Sufficient for us is it to know that heating of the old flywheel to remove it took but 20 minutes, and heating of the new flywheel prior to forcing it onto the shaft required but another 20 minutes. Total burner operating time was only 40 minutes, gas consumption was but 55 lbs. of propane, including the making of a preliminary heat test in order to be sure that the equipment would work as desired.

This was at a fraction of the cost of charcoal which would have been necessary to do the same job, and it was accomplished in much less time than would have been consumed in doing it by the older and more laborious method. Is it any wonder that the Great Northern Paper Co. was not only willing to pay a handsome price for rental of the burner, but thereafter looked to the B-P Gas men for solution of problems when heating problems were involved? The performance of this task did more to make the residents of Millinocket gas-conscious than a thousand dollars worth of advertising would have done, and the engine service man hastened back to his factory where a similar burner was built to handle any future jobs of a like nature which might arise!

•

Not only are the railroads prospects for burners of the type which I have described, but the manufacturers of engines, heavy machinery, tractors, automobiles and maintenance crews of America's giant industries are in the market for such equipment, as well. Machine shops are frequently called upon for shrinking jobs. You may be called upon to build such a burner assembly any day. It is something which you can do with a drill press, a pipe die, a pipe tap and "know-how" which can be gained from this chapter.

Similar applications are in all probability waiting for you right in your own bailiwick. A load of from 4 to 8 million pounds of B-P Gases yearly is waiting for this industry of ours in this particular field if we go after it intelligently.

What are we waiting for?

Cincinnati Standby Will Have Huge Storage Capacity

Construction of a $300,000 propane storage project which will give Cincinnati gas consumers an additional source of supply is now under way adjacent to the East End Gas Works, it was announced recently by Walter C. Beckjord, CG&E president.

Fifteen 25,000 gallon propane storage tanks will be installed at the East End site. They will have a total capacity equivalent to approximately 35,000,000 cubic feet of 1,000 Btu gas, Milton J. Pfeiffer, manager of gas production, said.

Foundations for the new project are being constructed now. Difficulties in obtaining critical materials and the short period for filling the new tanks with liquid propane may cause some delay, but the gas expansion program is expected to be completed before the end of this year.

Each storage tank will measure 8 feet, 7 inches in diameter by 66 feet in length, and will have a capacity of 25,000 gallons of propane.

POWER

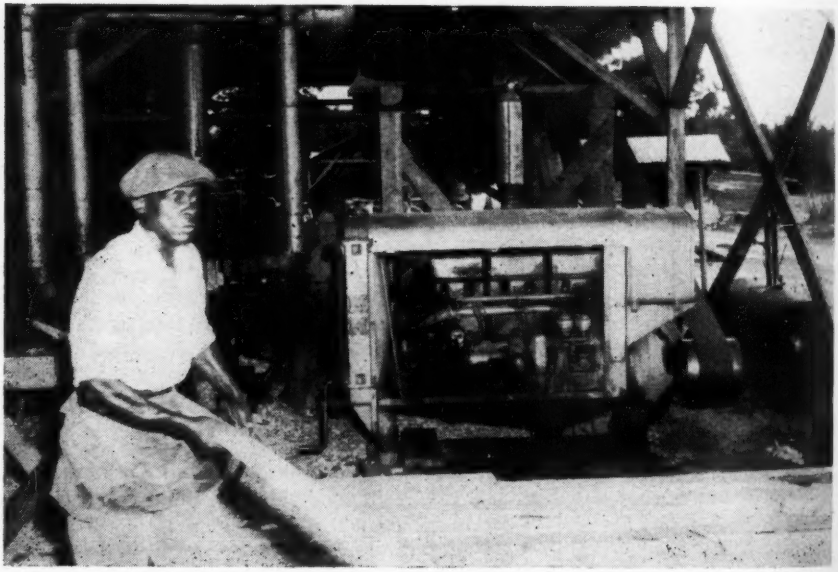
Processing Lumber in the South

WHEREVER liquefied petroleum gas has been used to power internal combustion engines it has stuck. This is because its performance results in lower maintenance costs, smaller oil consumption, and more satisfactory performance.

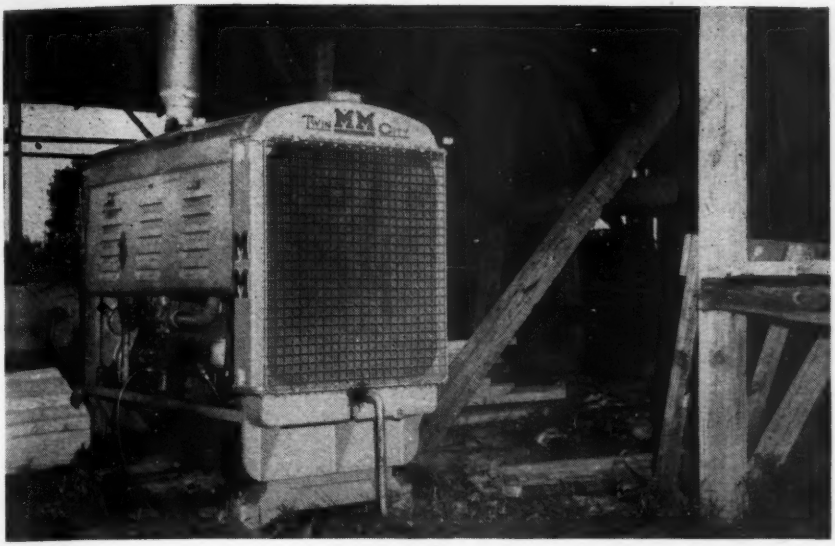
This record extends from heavy road equipment and trucks to farm tractors, irrigation pumps, dehydration machines, cotton gins, mines, saw and planer mill applications and many more.

In Mississippi the popularity of butane for power in saw mills and planer mills is the direct result of the excellent job it is doing. Two illustrations of this kind come this month.

The first is that of the C. L. Smith Lumber Co., with headquarters in Hattiesburg, Miss. There a Minneapolis-Moline Model HUA power unit was installed about a year ago. Jack B. Foster, writing for the company, says:



Butane engine in Mississippi planer mill



This butane engine powers planer, shavings fan and saws.

"We have had practically no mechanical trouble with the unit; however, we did have to replace three defective spark plugs and had to tighten the clutch after we had run the engine a few months.

"We find that our S. E. Woods Planer—6" by 8"—and the 50-in. shavings fan do not load the engine to capacity. We process about 50,000 feet of lumber (mostly boards) a week at a cost of approximately 44c per thousand for butane fuel and lubricating oil.

"We have been changing our oil every 50 hours but we will not change that often in the future because we have just been informed that oil can be used much longer when butane is used as a fuel. There is no crankcase dilution."

Concerning another planer mill operation in Mississippi, J. B. Edmondson writes to the Fowler Hardware Co., Hattiesburg, Miss., local butane dealers, as follows:

"Our Minneapolis-Moline power unit has been entirely satisfactory. It has ample power for our Woods 24" planer, the 52-in. shavings fan, cut-off saw and re-saw.

"The amount of lumber we can process in our 8-hour day varies from 8000 ft. of 1"x4"x8' long to 25,000 ft. of 2"x6"x8' long. In processing this quantity of lumber our engine will use about 48 gallons of butane and our cost for lubricating oil is about 57 cents per day. Total cost is $5.37 a day for butane fuel and lubricating oil."

THE ACCEPTED STANDARD FROM COAST TO COAST

leading engine builders choose

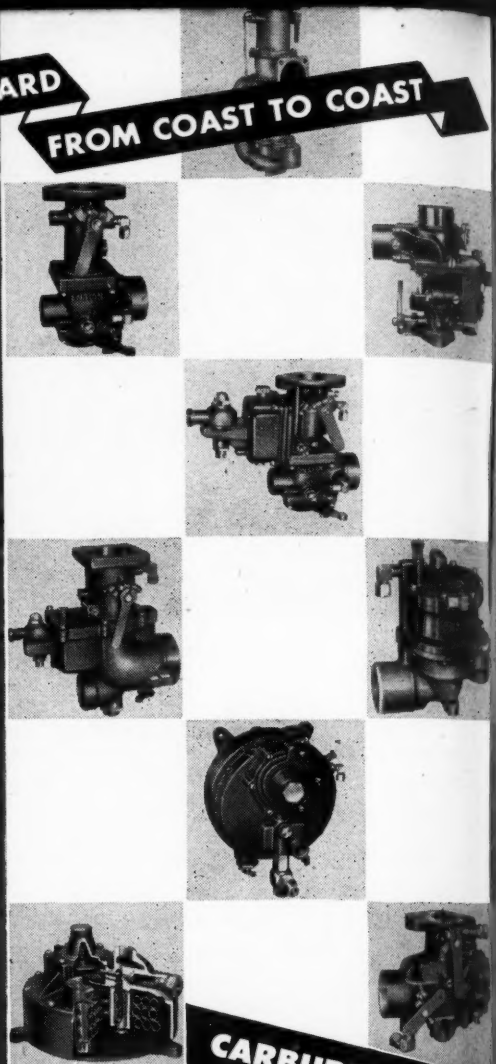
ENSIGN

for

efficient engine performance

on

butane - propane
natural gas
manufactured gas
sewer gas



CARBURETORS FOR EVERY ENGINE REQUIREMENT 5 to 500 HORSEPOWER

ENSIGN CARBURETOR COMPANY

7010 SOUTH ALAMEDA STREET • P.O. BOX 229 • HUNTINGTON PARK, CALIFORNIA

"PIONEERS IN EFFICIENT CARBURETION" • ESTABLISHED 1911

One Million Miles on Methane

DURING the war*, the Croydon Borough Council, London, carried out interesting and successful experiments on the use of methane as an alternate fuel. It is produced at the Croydon sewage works by the bacterial destruction of sewage sludge and now effects a saving of 85,000 gallons of gasoline a year. The methane, containing 10% carbon dioxide when supplied to automobile engines has a heating value of approximately 900 btu per cu. ft.

Twelve cylinders, in which the gas is stored under pressure of 5000 psi, are connected to a charging control panel, from which the automobiles receive their charge through a flexible pressure hose.

At the rear of the cab of the motor cars are four small high pressure storage cylinders mounted vertically in pairs and secured in a cradle slung under the chassis frame. Each cylinder is filled to a pressure of 3000 psi, the total capacity of the four cylinders being equivalent to about 10 gallons of liquid fuel.

The gas passes from the storage cylinders to a first stage reducing valve, located under the passenger seat, which brings the pressure down to 10 psi, after which it is further reduced to sub-atmospheric in a second-stage reducing valve mounted at the rear end of the engine cover.

From the second reducing valve, gas is supplied to the engine through a floating-piston-type mixing valve, which is indirectly controlled by the ordinary throttle butterfly of the carburetor.

The piston mixing valve, which is directly actuated by the reduction in pressure in the induction manifold, allows the correct quantity of methane to be drawn into the engine according to the throttle position, and admits the correct amount of air to form an efficient explosive mixture.

The charge then passes through a large bore pipe, which is coupled directly to the air intake of the carburetor. A graphite light oil is used for upper cylinder lubrication.

The Croydon Corp., after compiling considerable data from running 60 motor vehicles over 1,000,000 miles, reports that cylinder wear from using gasoline was .001 in. in 4390 miles and with methane the same degree of wear showed only after 7179 miles.

Another important feature is that carbon formation is less than half of that experienced when using gasoline. The engines are smooth running and there is a complete absence of "knocking."

Liquefying the gas commercially would remove the need for carrying the storage cylinders and would render the fuel easily transportable.

*From a 1946 issue of "The Commercial Motor," London.

D & L Transport Co. Opens Filling Station in Norwalk, Calif.

The D & L Transport Co., Norwalk, Calif., has recently opened a butane and gasoline service on their terminal property at the corner of Firestone Blvd. and Imperial Highway in the Downey-Norwalk district, Calif. Trucks, passenger cars, trailers and containers, when brought to the terminal, are being serviced at the station.

In November, 1945, E. P. Donahue,

The newly opened butane and gasoline dispensing station of D & L Transportation Co., Norwalk, Calif. Shown in the picture from left are Lew Knight; Ralph Hettick, driver; Norm. Granger, service station manager; Roy Long and E. P. (Don) Donahue, owners.

formerly with the General Petroleum Corp. for 20 years, and Roy Long, formerly vice president of the Valley Express Co., Fresno, Calif., formed a partnership and named their company the D and L Transport Company.

The organization started primarily as a bulk transporter of LP-Gas prod-

GO with a TATTERSFIELD

DUAL BUTANE MANIFOLD

ORDER TODAY

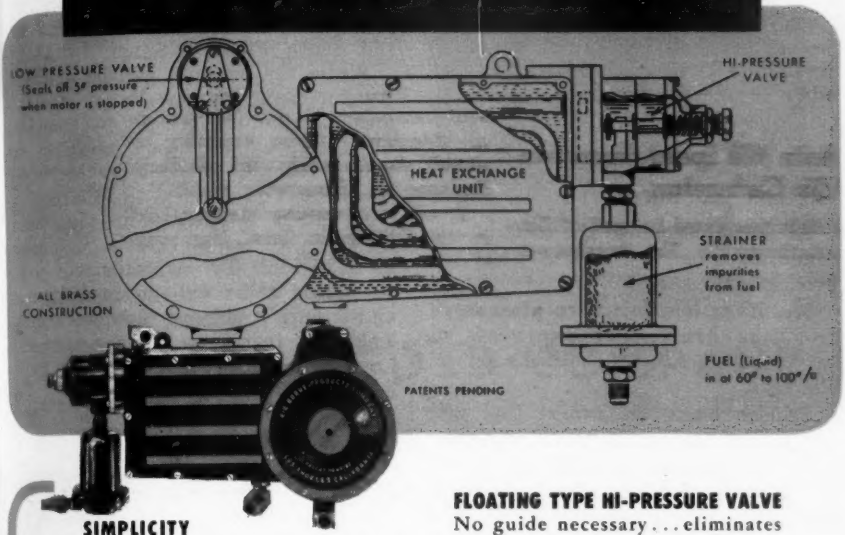
NOW AVAILABLE

Illustrated is a G.M.C. Dual Butane Manifold to fit all medium G.M.C. motors such as T-18, T-23, T-33, AC500, AC600 models. Its balanced fuel distribution will give at least 10 per cent better mileage.

ELECTRIC & CARBURETOR ENGINEERING CO.

2323 E. 8th St. *"Pioneers of the Butane Industry"* Los Angeles 21, Calif.

Air Borne's TROUBLE-FREE DESIGN GIVES SUPERIOR PERFORMANCE


LOW PRESSURE VALVE
(Seals off 5# pressure when motor is stopped)
HI-PRESSURE VALVE
HEAT EXCHANGE UNIT
STRAINER removes impurities from fuel
ALL BRASS CONSTRUCTION
FUEL (Liquid) in at 60° to 100°/o
PATENTS PENDING

SIMPLICITY
Only two moving parts. No valve guides to stick or create friction.

EASIER STARTING and EXCELLENT IDLING PERFORMANCE OBTAINED
This is made possible by a large diaphragm area and a 4 to 1 leverage on the low pressure valve.

EASILY OVERHAULED WITHOUT REMOVING ENTIRE UNIT
Integrated construction allows replacement of low and high pressure valve assemblies and strainer sock without removing the *Air Borne* unit from its mounting.

FLOATING TYPE HI-PRESSURE VALVE
No guide necessary . . . eliminates sticking and allows easy instant action.

WET FUEL COMPLETELY CHANGED TO DRY GAS
Design of heat exchange unit allows perfect circulation of water in unit.

LONG LIFE FOR MOVING PARTS
Valve units are isolated from heat, prolonging the life of the neoprene seats and diaphragms.

OIL IN FUEL CANNOT CLOG DIAPHRAGM
All oil in fuel drains out bottom of regulator and is drawn into motor to aid valve lubrication.

FURTHER INFORMATION WILL BE GLADLY SENT ON REQUEST

Air Borne Products Company
1829 East Randolph Street, Los Angeles 1, Calif. ★ LUcas 0185

KOHLER CONVERSION UNITS IMMEDIATELY AVAILABLE

ucts and then branched out as a distributor of fuel for the General Petroleum Corp.

The operations, which started with one truck, now use four pieces of heavy duty equipment, and are presently serving customers throughout Southern California and Nevada. It was stated that their practices are not limited to this area and will expand when the need arises.

Al Reitz Will Speed Production Of Dix Carburetors

Al Reitz has joined the staff of Dix Manufacturing Co., Los Angeles, as production manager.

Mr. Reitz has just been discharged from the Army after two years of service, 20 months of which he served overseas.

Besides being an expert tool and die maker and production engineer, Mr. Reitz has had considerable experience in the butane-propane industry, having become interested in this field as early as 1936. During the following years, he worked for the Ransome Co. and G. H. Bragg in the Fresno area. Much of his time was spent on carburetion.

He will be in charge of manufacturing at the Dix plant and it will be his job to put the new Dix carburetion unit into full scale production in the next few months.

American Liquid Gas Corp. Moves Chicago Office

The Chicago offices of the American Liquid Gas Corp., whose headquarters are in Los Angeles, have recently been moved to 1850 Peoples Gas Bldg., 122 South Michigan Ave.

The zone number is Chicago 3 and the phone number is Webster 2533.

LPGA Schedules Meeting in Fresno, Calif., Nov. 15

The Liquefied Petroleum Gas Association will hold a sectional meeting Nov. 15 in Fresno, Calif., according to Don McNary, assistant to Tallent Ransome, vice president of the South Pacific Section, LPGA.

While the meeting will be primarity for San Joaquin Valley dealers and distributors, it will be open to all interested. Those expecting to attend should notify Mr. McNary, Ransome Co., Emeryville, Calif.

It will be a one-day meeting, held in the Californian hotel, beginning at 9:30 a.m. Ty Ransome will preside aand talks will cover financing and credit problems; appliance outlook, and insurance. At the noonday luncheon special entertainment will be provided.

This is the first of a series of district meetings planned by the LPGA. Succeeding ones will be in Sacramento and Los Angeles.

ATA Booklet Shows Truck Transport Data

A 37-page illustrated booklet showing important trends in truck transportation in recent years has been released by the American Trucking Associations, Inc. Entitled "Trends," the booklet gives information on such factors as average load, length of haul, wage per employe, investment, revenue, mileage, number of power units and trailers, and other significant factors.

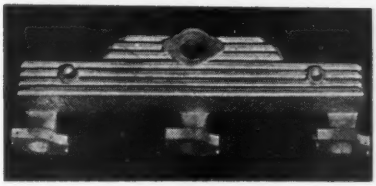
Fourth in a series of similar publications, the issue presents authentic data from official reports of Class I truck lines to the Interstate Commerce Commission, and regional breakdowns of this material make possible comparative studies of truck operating characteristics.

Mr. Dealer TRY A MANIFOLD

On Your Own Service Truck

Prove to your own satisfaction that a specially designed *Bu-Power* Manifold puts power and economy into a butane converted truck. Here are some of the reasons why:

1. 60% LOWER OPERATING TEMPERATURES —maintained by the presence of seven cooling fins, extending the full length of aluminum manifold.
2. 73% MORE VOLUME (than stock manifold)—permits the use of larger venturi.
3. PERFECT DISTRIBUTION to all cylinders means a smoother operating engine.
4. EASILY INSTALLED — every manifold has three vacuum brake take-offs.



5. STEEL EXHAUST "BLOCK-OFF" PLATES FURNISHED ON REQUEST — Cutting or welding exhaust manifold eliminated.

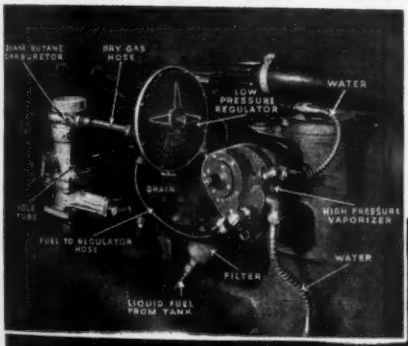
Our dealers, who "Bu-Power" installations, find their customers enjoy BETTER PERFORMANCE—INCREASED MILEAGE.

ELLIS MANIFOLD COMPANY

1708 S. Soto Street ★ Phone AN 1-3463 ★ Los Angeles 23, California

Let's get on the BEAM!

BUTANE CARBURETION



MORE POWER
FASTER ACCELERATION
INSTANT STARTING
ECONOMICAL

HUNDREDS OF INSTALLATIONS FROM AUTOS, TRUCKS, STATIONARY ENGINES TO CONVERTED DIESELS. *PROVEN FOR MANY YEARS.*

DEALERS • WRITE FOR FULL PARTICULARS

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1206 E. 6TH ST. LOS ANGELES 21, CALIF.
MAKERS OF 'TWIN-BALL' SAFETY CONTROL

CURRENT READING

• Reviews of new books, pamphlets and articles published in recent magazines of interest to technicians and executives in the liquefied petroleum gas industry. Those interested in reading any complete article or book should write to the publications named.

•

It Will Pay to Convert to Propane-Air—H. E. Thomas and P. E. Peacock, Jr. "Gas," July, 1946, pp. 32-36. Sixteen years' experience in the field of liquefied petroleum gas and its applications to the manufactured gas field have convinced the authors of the economy of converting manufactured gas systems to liquefied petroleum. Of particular interest to many companies contemplating making the change is the relative independence of labor needs, a factor particularly timely in view of present labor unrest. Savings, the authors have determined, may be effected in production operation, distribution, and maintenance.

Preparation of Synthetic Samples of Low-Boiling Hydrocarbons—R. H. Busey, G. L. Barthauer and A. V. Metler. "Industrial and Engineering Chemistry," Anal. Ed., July, 1946, pp. 407-411. The design and operation of an apparatus for the blending of low-boiling hydrocarbons are described. The apparatus is so designed that standard samples containing any number of components may be prepared rapidly, in any size, and with a degree of accuracy far superior to present methods of analysis. The apparatus has been thoroughly tested. Data are presented for samples in the butane and pentane range.

Multi-Cylinder Pumping Engines—Their Care and Maintenance—E. Hosford. "Oil Weekly," July 8, 1946, pp. 44, etc. The multi-cylinder engine or power unit has been employed extensively as the prime mover to pump oil wells. Experience has indicated the necessity of following certain rules in the operation of these units and some of these are presented and discussed in this article. The article is confined to the water-cooled multi-cylinder engine using gas or gasoline as fuel.

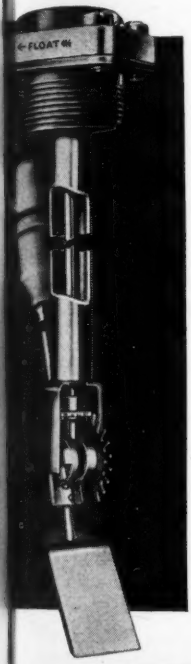
Water Injection in a Spark-Ignition Engine—W. P. Green and C. A. Shreeve. "Transactions," A. S. M. E. July, 1946, pp. 541-545. The present war witnessed a revival of interest in the use of water as a coolant and detonation suppressor inside the engine cylinder. This paper gives a review of past tests on the use of water for the above uses in gasoline engines.

Utilization of Electric Energy in Natural Gasoline Plants—H. S. Davis. "California Oil World," 1st July issue, 1946, pp. 13, etc. Part 2 and last. Part 1 in 2nd June issue, 1946.

Summary of Motor Vehicle Accidents, Petroleum Industry—for 1945. Published by the American Petroleum Institute, Department of Accident Prevention, August, 1946.

As you can see, installation of Rochester LP Gas Gauges is simple. Four bolts and the gauge is in place. Once in place, it's easy to read.

THE STORY IN AN "Eyeful..."



YOU BUY CONVENIENCE
with Rochester Gauges

Rochester LP Gas gauges provide the only quick, convenient and completely safe means for reading liquid level in LP Gas tanks. One look tells you the story. No fuss. No bother. Dial chamber is sealed so no moisture can get inside to fog the glass.

Moreover, Rochester gauges are easily installed and maintained. If a glass or dial is damaged, the entire indicating unit can be quickly replaced by a new one *without disturbing gauge mechanism inside the tank,* therefore, without loss of contents or pressure! These "Criterion" gauges are listed by the underwriter. You may apply them to your systems with complete confidence. May we send you further information?

ROCHESTER MANUFACTURING CO., INC.
17 ROCKWOOD ST., ROCHESTER 10, N. Y.

ROCHESTER LPG GAUGES—Model 3120 Gauge (illustrated) fits Bastian Blessing head No. 2465 or Wheatherhead Manifold No. 900 as well as pipe thread risers, 1½" or 2". Model 3121 gauge is designed for Bastian Blessing Multi-Valve head, No. 2418.

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Guaranteed Accuracy

ENGINEERED INSTRUMENTS
LIQUID LEVEL, TEMPERATURE AND PRESSURE GAUGES

PRODUCTS

Floor Furnace

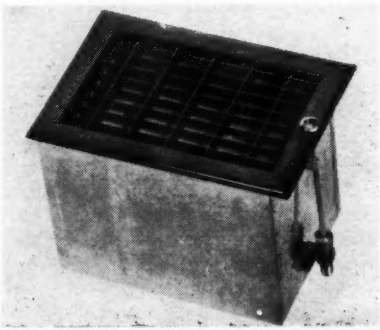
Mutual Liquid Gas Equipment Co., Inc., 3600 W. Imperial Highway, Inglewood, Calif.

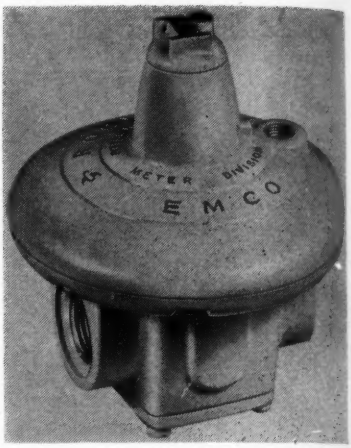
Model: Mutual's Mighty Midget Floor Furnace—M-1.

Description: This is a compact floor furnace for use with propane or butane. It is especially adaptable to trailers and cabins because of its size and ease of installation. The unit has an estimated Btu output of 9000.

The unit is down-vented, has updraft and odorless operation. All fresh air is drawn from outside which allows near perfect combustion, eliminates odor, gives constant supply of fresh air, even heating, prevents interior sweating.

Furnace is 11 in. long, 7 in. wide and 8 in. deep. Weight is approx. 8 lbs. Unit is easy to install by following simple procedure on instruction sheet. Furnace is made of heavy gage sheet metal with patented burner and special brass valves. All spot-weld fabrication.





Regulator

Rockwell Manufacturing Co., 400 No. Lexington Ave., Pittsburgh 8.

Model: Rockwell-Emco Appliance Regulator.

Description: The bodies and covers of these regulators are made from a special non-corrosive and durable aluminum alloy that weighs one-third as much as iron. The smooth exterior surfaces are finished with a protective coating of neutral grey lacquer.

They range in sizes from ⅛" through 1¼" with areaways large and smooth-walled to hold pressure absorption to a minimum. Valves and seats are of generous proportions. Their light weight makes possible savings in shipping costs and facilitates handling.

Gas Burner

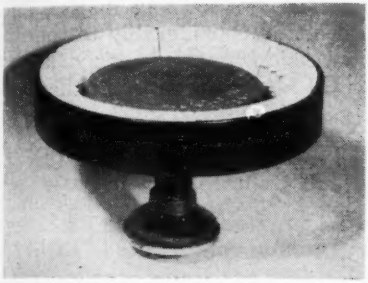
Chicago Combustion Co., Dept. 5, 455 W. 45th St., New York 19.

Model: Argil Gas Burner.

Description: According to the manufacturer, in laboratory tests this burner consumed ¼ less gas than did an ordinary burner and during the same test it brought water to the boiling point 18 minutes faster than did an ordinary burner.

Quick adjustment to butane or propane, or for any kind of gas, is made possible by the adjustable gas spud.

The gas burner's infra-red rays produce heat so even and intense that all gas passing to and through it must burn. The construction shields the flame from cross currents of air under urns or steam tables.

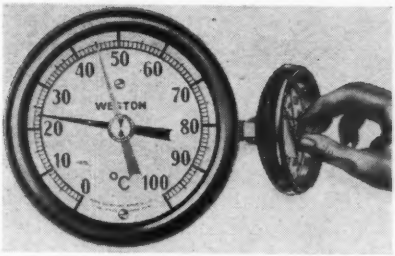


Thermometer

Weston Electrical Instrument Corp., Newark, N. J.

Models: 221M and 222M.

Description: Indicating the maximum or minimum temperatures reached, this new all-metal thermometer is known as the Max-Min. It carries the same accuracy guarantee as the standard Weston thermometers. The two models now available have scale diameters of three and five inches. It is also available in stem lengths from two and one-half to 48 inches.



The thermometer is equipped with an auxiliary red index which is manually set by a finger knob.

When a record of the lowest temperature reached is desired, this index is placed to the low side of the temperature pointer. The pointer will move the index to the lowest temperature reached during any operating period, and the index will remain at that low point until manually re-set. For a record of the highest temperature reached, the index is simply set at the high side of the pointer.

Pump Catalog

In addition to a new catalog No. K-64 recently published by Smith Precision Products Co., South Pasadena, Calif., covering their line of Smith butane-propane pumps and which was mentioned in last month's issue, the Smith Company has also had reprints made of the various articles contributed by them to **Butane-Propane News** covering "Pump Installation Problems." Copies of these are available to owners of butane-propane plants from Smith Precision Products Co. and will be found helpful in outlining new plants, as well as in establishing a basic understanding of the physical principles involved in butane-propane pumping.

Colorado Dealers Elect New Officers At Annual Fall Meeting

THE annual fall meeting of the Colorado Liquefied Petroleum Gas Association was held in Denver Oct. 13-14 and was featured by the election of new officers, exhibits of industry appliances and equipment and important talks by prominent speakers.

E. L. Scott, of Scott & Wernett, Holyoke, was named to head the organization for the coming year. He replaces Harry Torbit, Union Gas & Equipment Co., Pueblo, who helped to organize the association in 1945 and whose outstanding leadership has contributed so importantly to its success.

Other officers elected are:

First vice president—Geo. Cummings, Cummings Gas & Equipment Co., Gunnison.

Second vice president — R. E. Hustead, Denver Propane Co., Denver.

Secretary-treasurer—W. E. McCabe, Eaton Metal Products Co., Denver.

These officers are also members of the new board. The additional directors are:

Loyce Warren, Monte Vista; John Powers, Grand Junction; C. L. Graves, Estes Park; Leo Farley, Denver; T. H. Anderson, Denver.

According to T. H. Anderson, outgoing secretary, there were 22 merchandise displays, including broad coverage: four makes of ranges, three of water heaters, several furnaces and circulators, several bulk tanks, in addition to conversion burners, Servel, and miscellaneous items.

Top registration was 265 for the evening banquet, at which Clayton Rand spoke for about and hour and 15 minutes. His reception was outstanding; he was in fine fettle and added considerably to the final impression carried away by the people attending; in fact they gave him a "standing vote" of appreciation when he finished.

ICC Jurisdiction Discussed

The registration was 235 representing members, and about 30 guests. The round table in the afternoon, in charge of W. F. Kite, of Trinidad, Colo., and Raton, New Mexico, brought out a number of worth while problems; the scope of ICC in connection with tank trucks, safety suggestions, news on insurance, and other items were discussed; the attendance was about 200.

There was favorable comment on the fact merchandise exhibits were open Sunday afternoon previous to the meeting; this seemed to please the exhibitors and members alike. The talks, four in number, during the daytime program were well received: particularly since each speaker was connected directly, in one way or another, with the LPG

FOR SALE

New Propane Storage Tanks

5000 Gallon Net Capacity

6 Tanks On Hand — Immediate Delivery

Diameter—89⅝ inches
Overall Length—21 feet plus
Heads Spherical
250 lbs. W. P.—API-ASME
2 Pads for Supports, 16 in. wide
Center-Center Pads—7 ft. 3 in.
No Fittings Included in Price
Tanks Have Openings as Listed:

- 2 in. for safety valve (in top)
- 1 in. for rotary gage (in head)
- ¾ in. outage for butane (in head)
- ¾ in. outage for propane (in head)
- ¾ in. thermo well (in shell)
- 2-3 in. for liquid lines (in bottom)
- 1 in. vapor line (connection bottom)
- 1 in. vapor return (connection bottom)
- 2 in. drain (in bottom)

Price $2000.00 Each—F.O.B. Los Angeles

ROY E. HANSON

1924 COMPTON AVE., Tele. PRospect 2152 LOS ANGELES 11, CALIF.

business, and could therefore speak with authority on his subject.

The crowd danced and enjoyed itself in the evening, after the banquet, in the Cosmopolitan Silver Glade. The State Inspector of Oils (the enforcing officer in Colorado), and several members of the State Legislature were honor guests at the noon luncheon.

Members Liked the Theme

The theme, "Sales and Service: Now," seemed to be well taken. The membership seemed in accord with the fact that dealers must forget the seller's market and "go to work."

Program speakers and their subjects were:

"Sales Promotion of LPG Heating," by J. H. De Loria, advertising manager of Skelgas Division, Skelley Oil Co., Kansas City.

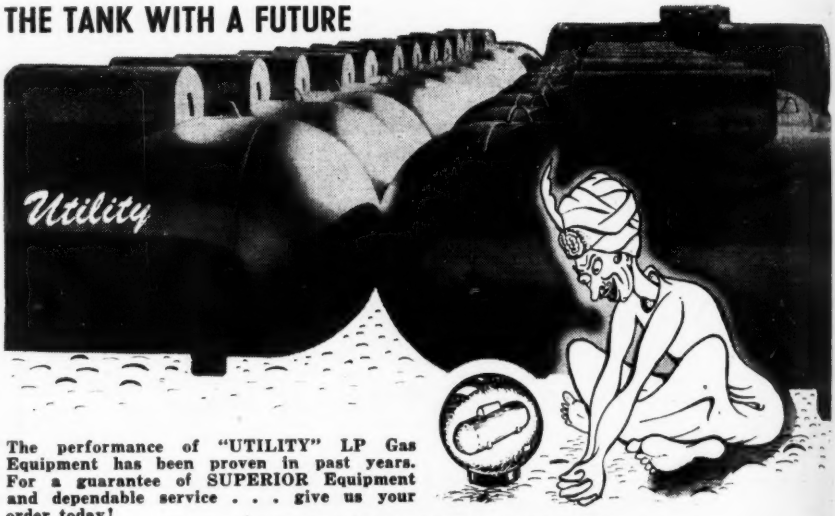
"Conquest of Asia," by E. E. Hadlick, executive vice president of the National Butane - Propane Association, Minneapolis.

"A Safer LPG Industry," by H. A. Goodwin, division manager, The Bastian-Blessing Co., Chicago.

"This Business of Ours," by Ted Carrow, manager of LP-Gas sales department, Cribben and Sexton Co., Chicago.

The address of welcome was given by Hon. Deane Gillespie, Congressman from the First Colorado District.

THE TANK WITH A FUTURE

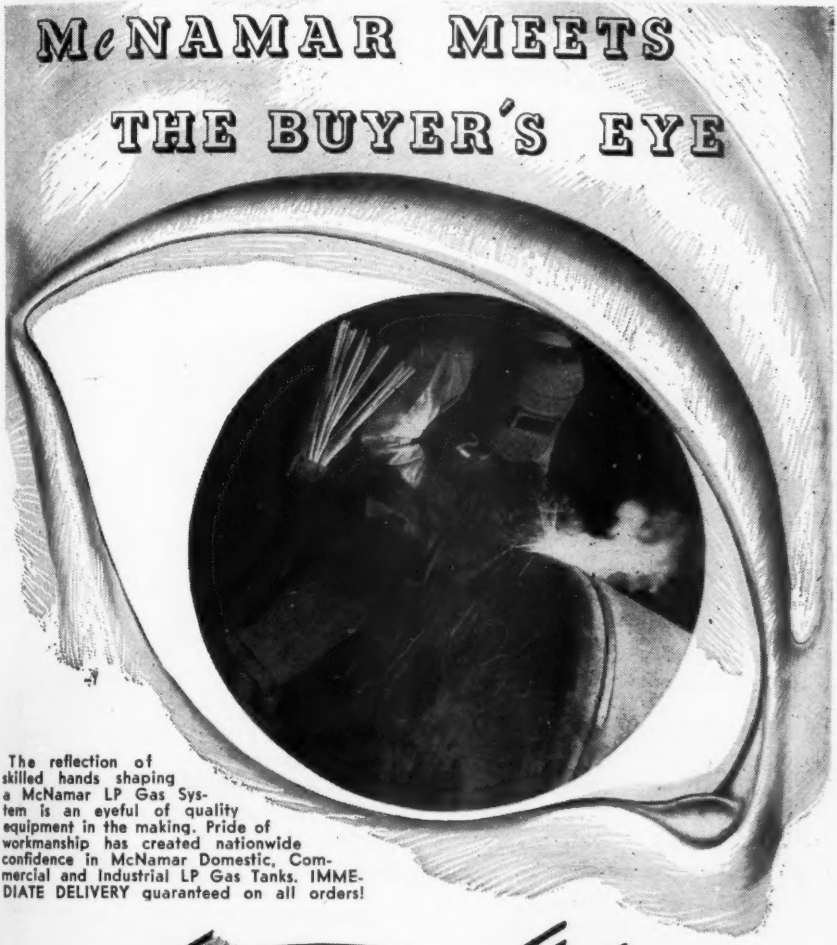


The performance of "UTILITY" LP Gas Equipment has been proven in past years. For a guarantee of SUPERIOR Equipment and dependable service . . . give us your order today!

BUTANE EQUIPMENT CO., INC.

3301 S. Lamar, Box 1451 Dallas, Texas

McNAMAR MEETS THE BUYER'S EYE



The reflection of skilled hands shaping a McNamar LP Gas System is an eyeful of quality equipment in the making. Pride of workmanship has created nationwide confidence in McNamar Domestic, Commercial and Industrial LP Gas Tanks. IMMEDIATE DELIVERY guaranteed on all orders!

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Write Today for 70 page booklet of Strapping Tables

P.O. BOX 868 TULSA, OKLAHOMA

McNAMAR BOILER & TANK CO.

— Officers and Directors —
National Butane-Propane Association

AT the September convention of the National Butane-Propane Association, held in Chicago, officers and directors were elected for the ensuing year. (For convention story, see Page 31):

The complete list, as supplied by Elwin E. Hadlick, executive vice-president, follows:

PRESIDENT

J. Richard Verkamp,
The Verkamp Corp.,
Cincinnati, Ohio.

FIRST VICE PRESIDENT

John M. Robinson,
Butane Gas Co.,
Woodworth, La.

SECOND VICE PRESIDENT

Joseph S. Fagan,
Mutual Liquid Gas & Equipment Co.,
Inglewood, Calif.

SECRETARY

V. W. Packard,
Petgas Co.,
Petoskey, Mich.

TREASURER

Harry H. Torbit,
Union Gas & Equipment Co.,
Pueblo, Colo.

VICE PRESIDENTS

Forrest Fram,
Fram Heating Co.,
Chagrin Falls, Ohio.

F. N. Mabee,
Colorado Natural Gas & Fuel Co.,
Denver, Colo.

V. W. Packard,
Petgas Co.,
Petoskey, Mich.

Hermann Paris,
Georgia Butane Gas Co.,
Sandersville, Ga.

L. V. Rothrock,
Liquid Gas & Appliance Co.,
Twin Falls, Idaho.

BY DISTRICTS

No. 1—L. V. Rothrock,
Liquid Gas & Appliance Co.,
Twin Falls, Idaho.

No. 2—Joseph S. Fagan,
Mutual Liquid Gas & Equipment Co.,
Inglewood, Calif.

No. 3—F. N. Mabee,
Colo. Natural Gas & Fuel Co.,
Denver, Colo.

No. 4—V. W. Packard,
Petgas Co.,
Petoskey, Mich.

No. 5—J. M. Robinson,
Butane Gas Co.,
Woodworth, La.

No. 6—Hermann Paris,
Georgia Butane Gas Co.,
Sandersville, Ga.

No. 7—Forrest Fram,
Fram Heating Co.,
Chagrin Falls, Ohio.

BY STATES

W. T. Joplin,
Joplin Bottled Gas Co.,
Phoenix, Ariz.

Joseph S. Fagan,
Mutual Liquid Gas & Equipment Co.,
Inglewood, Calif.

Harry H. Torbit,
Union Gas & Equipment Co.,
Pueblo, Colo.

Mutual

SHOP and FIELD FURNACE Can Mean NEW PROFITS For You!

Mutual Shop and Field Furnace gains new customers for you. Its uses include: melting tar for roofers, sulphur compound for water or sewer lines, lead melting and general field shop use. You are sure to find customers in your area who need just such a furnace for these and many other uses.

This Mutual furnace will burn vapor direct from cylinder or vaporize liquid. 12 in. furnace size accommodates 12 in. melting pot; 240 lb. capacity. Other sizes to order.

Mutual Blow Torches shown here have many uses. Model No. 6 (top) is designed for use where air is plentiful—such as lead melting joints, pre-heating of steel, in chicken houses, etc. * * No. 7 is for use in close quarters. Primary and secondary air is taken from above. Good for inside barrels, burning out paint kettles, weed burning, etc. * * Torches are 28 in. overall, have bronze heads, plastic grips, needle valve and removeable orifice.

Mutual LIQUID GAS EQUIPMENT CO., Inc.
3600 West Imperial Highway, Inglewood, Calif.

Fred W. Warner, Jr.,
Southeastern Natural Gas Corp.,
Miami, Fla.

L. V. Rothrock,
Liquid Gas & Appliance Co.,
Twin Falls, Idaho.

S. Beske,
Kay Gases Co.,
Chicago, Ill.

A. R. Stryker,
Stryker Brothers
Lawrenceburg, Ind.

Leland L. Harms,
Harms Oil Co.,
Allison, Iowa.

R. N. Short,
Red Devil Butane Gas Co.,
Franklin, Ky.

C. W. Guy,
General Gas Corp.,
Baton Rouge, La.

E. Martin Anderson,
Utilities Distributors, Inc.,
Portland, Maine.

W. H. Wulf,
Eastern Shore Gas Corp.
Snow Hill, Md.

Earl C. St. Cyr,
Cyr Bottled Gas Co.,
Marquette, Mich.

John L. Locke,
Northwestern Blaugas Co.,
St. Paul, Minn.

F. A. Anderson, Jr.,
Gloster Gas Co.,
Gloster, Miss.

H. G. Baur,
Butane Gas & Appliance Co.,
St. Louis, Mo.

D. O. Mecklenburg,
Montana Butane Gas Co.,
Billings, Mont.

Do a BIG Business on SMALL Capitol and make QUICK PROFITS this Fall

Our new financing plan will enable qualified dealers to carry a large stock of Butane and Propane tanks without putting up more than 10%. The balance of the stock will be financed by Universal C. I. T. Credit Corporation at low rates.

Get in touch with us at once for complete information.

Delta Tank Manufacturing Company, Inc.

P. O. Box 1469
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P. O. Box 1091
Macon, Georgia

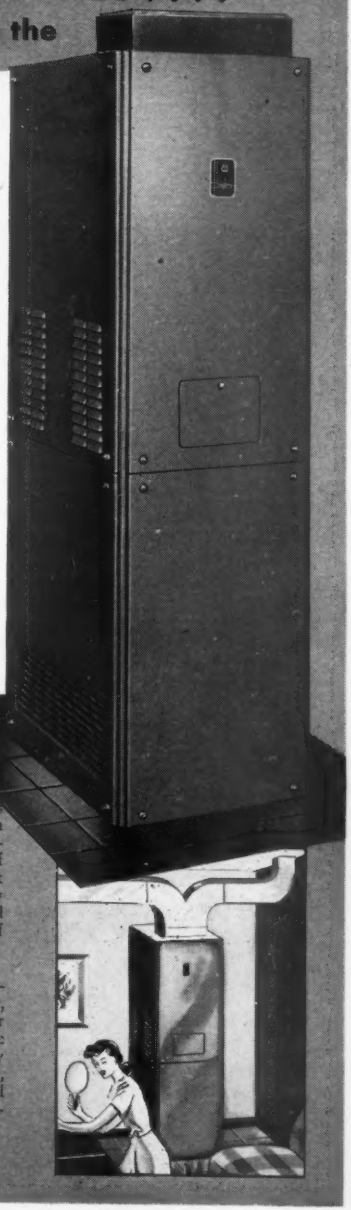
NEW COMFORT FOR THOUSANDS . . . .
NEW PROFITS FOR YOU . . . With the

HUMPHREY
NO. 75
HEAT CABINET

THIS new, smartly styled, gas burning, Forced Air Heater provides the maximum in comfort and heating economy. Modest in price, easy to install and completely automatic in operation, it is ideal for heating homes, shops, stores, restaurants, beauty parlors and countless other places. Every part of the Humphrey Heat Cabinet is sturdily constructed of best quality materials. Skilled designing, advanced engineering and careful workmanship are reflected throughout its entire assembly. It is built to give years of heating satisfaction.

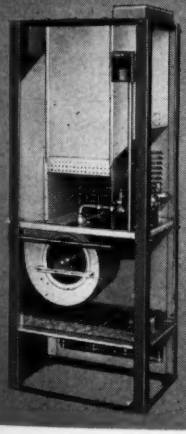
A powerful, blower-type fan, statically and dynamically balanced, delivers an abundance of filtered, humidified, circulated warm air to every point needing heat.

A HUMPHREY H PRODUCT



GENERAL GAS LIGHT COMPANY
202 NO. PARK STREET, KALAMAZOO 11, MICH.

THESE FEATURES MEAN NEW SALES
TO HOMES • SHOPS • OFFICES • STORES



Simple, positive acting gas controls. Combination Fan and Limit Control. Electrically welded heat exchanger of heavy gauge steel. Precision built burner with exclusive Humphrey micro-adjustment air shutters. Oil impregnated filter cartridge of "throwaway" type.

75,000 B.T.U. per hour input rating. Rugged ¼ horse power, capacitor type motor. Humidifier with specially processed ceramic evaporating units located directly in the warm air stream. Slender, compact, handsomely finished cabinet. Every part easily accessible for servicing.

C. A. Nelson,
Butane Gas Corp.,
Omaha, Neb.

Samuel Kapnek,
Natural Gas Service, Inc.,
Hammonton, N. J.

T. A. Sacra,
Sacra Brothers,
Roswell, N. M.

R. J. Coughlin,
Westland Oil Co.,
Minot, N. Dak.

J. Richard Verkamp,
The Verkamp Corp.,
Cincinnati, Ohio.

S. S. Margulies,
Western Gas & Appliance Co., Inc.,
Rapid City, S. Dak.

W. E. Fraley,
Fraley and Co.,
Abilene, Texas.

Orson P. Wright,
Rocky Mountain Gas Co.,
Salt Lake City, Utah.

V. J. Mueller,
Wisconsin Bottle Gas Co.,
Portage, Wis.

Gas Oil Products, Inc., Opens Sixth Branch in Florida

The Gas Oil Products, Inc., of Florida, distributors of bottled gas and a complete line of gas appliances, opened its sixth Florida store in Fort Pierce last month. Charles Ash is manager.

The company has been operating on the east coast of Florida for the past 10 years, with main offices in Coral Gables, and branch stores in West Palm Beach, Fort Lauderdale, Miami and Homestead and gas plants in Miami, Fort Lauderdale and Homestead. It bottles its own gas.

Hidden Ingredients

IN EVERY SHIPMENT
OF SINCLAIR LP-GASES

SINCLAIR "Integrity", "Reputation" and "Personal Service" are "hidden ingredients" which come to you in every shipment of SINCLAIR LP-GASES. These make the name SINCLAIR mean more to its dealers.

The test of a source of supply is in the way it takes care of its customers requirements during the season of peak consumption. SINCLAIR'S planned production fills the orders of its dealers with regularity. Plan your propane purchases with SINCLAIR now.

SINCLAIR PRAIRIE OIL COMPANY
SINCLAIR BUILDING • TULSA, OKLAHOMA
LIQUEFIED PETROLEUM GAS DIVISION

Thank You! Your Acceptance and Response Has Been Gratifying and A Great Tribute to the Outstanding Performance of **TiteSeal**

All the Way From Producing Wells to Appliance Installations

L P-GAS MEN *Depend on–*

TiteSeal

--- To Prevent Leaks

TiteSeal, the indestructible gasket and joint-sealing compound, is especially compounded for use on butane, propane and other LP gases, on installations above and below the ground, and wherever the LP industry must have absolute LEAK-PROOF SECURITY.

TiteSeal will not dry out, harden, crack or crumble . . . preserve gaskets and rubber connections. . . heat and coldproof . . . vibration and pressure proof . . . impervious to gases, oil, water, acids, steam and practically all liquids . . . . . AND *TiteSeal* IS ABSOLUTELY LEAK-PROOF.

● PLEASE NOTE TOO, THAT YOU CAN OBTAIN YOUR REQUIREMENTS OF TITESEAL FROM ANY OF THE BETTER WHOLESALERS OF PLUMBING, HEATING SUPPLIES, AND EQUIPMENT.

THE L P-GAS INDUSTRY IS **TiteSeal** BOUND

RADIATOR SPECIALTY COMPANY
CHARLOTTE 1, NORTH CAROLINA
- RADIATOR SPECIALTY COMPANY OF CANADA, LTD. TORONTO
- GOLDEN STATE RUBBER MILLS, LOS ANGELES, CALIFORNIA

THE TRADE

Stanley C. Bernhardt has been elected vice president and sales manager of the **Grand Home Appliance Co.**, division of the Cleveland Cooperative Stove Co., Cleveland, Ohio. This was announced recently by James Mitchell, president.

Mr. Bernhardt, formerly vice president in charge of sales of the Estate Stove Company, Hamilton, Ohio, will succeed A. B. Cameron, who recently resigned his connection with Grand Home Appliance Co.

John V. Burns, a World War II veteran, has been assigned as Western Ohio sales representative and Howard A. Reaney has been named associate branch manager of the Los Angeles office of the **Tappan Stove Co.**

Mr. Reaney replaces R. James Swallen, who was transferred to the Kentucky-Tennessee territory.

First ten of a series of "Combustioneering" data sheets especially prepared for combustion and process engineers are offered by the Industrial Division of **Bryant Heater Co.** Mathematical tables, properties of gases, metals and other materials, and gas orifice capacity tables are included in the initial sheets, which are intended to bring together useful gas combustion and industrial heating data not

Grouped around the banquet table above are officials of The Maytag Co., Newton, Iowa, and executives from the five branches of the company throughout the United States. The picture was taken during a recent conference in Newton at which plans were made for merchandising the new Maytag Dutch Oven gas range.

readily available in a single reference source.

Additional material will be added from time to time, in notebook punched sheets uniform with those now ready. Available on request to the Industrial Division, Bryant Heater Co., 1020 London Road, Cleveland 10, Ohio.

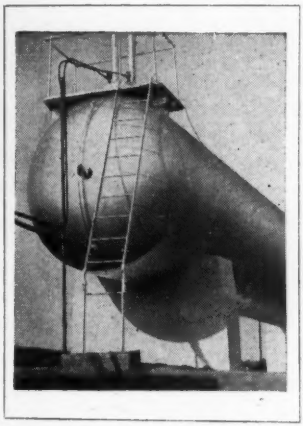
W. J. McCauley has joined **H. E. Lynn and Co., Inc.,** Los Angeles, as an engineer. He will be in charge of engineering and development of the "Helco" line of butane-propane products which will include regulators, valves, fittings and other equipment for use in the B-P Gas industry.

Mr. McCauley comes to the organization with over 20 years experience as an engineer and tool designer. Much of this time was spent in the aircraft industry where he was employed in development and production work. His last 12 years were spent with Douglas Aircraft Co.

The engineering of standby and bulk plants and the custom engineering of tank trucks will also be a part of Mr. McCauley's work.

John M. Bess, recently appointed executive vice president of the Noma appliance divisions, **Noma Electric Corp.,** has announced that the Estate-Heatrola division will include, in its 1947 manufacturing and sales operations, a line of household refrigerators, home freezers in 4, 6, 12, and 22 cubic ft. capacity, a de luxe line of kitchen cabinets, stainless steel kitchen sinks, and electric and gas water heaters.

The capital stock of the **Peerless Manufacturing Corp.,** Louisville, Ky., has been purchased by G. L. Ohrstrom



18,000 Gal. Water — 15,000 Gal. Liquid Propane Storage Tank 8'0-1/16" I.D. x 50'5-1/4" Long.

—SAFETY!—

Butane - Propane Tanks Designed for Rigid Requirements

Liquefied Petroleum Gas tanks by Lancaster are custom-designed to provide a lifetime of safe and economical storage. This reputation is made up of factors, such as highly-trained engineers, skilled workmanship, x-ray inspection of finished U-68 welds and many others. Please send us your inquiries today for prompt attention with no obligation on your part.

Bulk Tanks • Skid Tanks • Truck Tanks
Gas Plants for Municipalities

LANCASTER IRON WORKS, INC.

LANCASTER PENNA.

& Co., 40 Wall Street, New York. G. L. Ohrstrom, H. T. Cavanaugh and Merrill Stubbs, partners of the Ohrstrom firm, were elected to the Peerless board of directors.

The purchase was made for investment purposes only and not for resale; there will be no combining with other companies. "Peerless" manufactures a complete line of gas-fired heating equipment.

It was disclosed there will be no change in the management or policies of Peerless. F. W. Carter will continue as president; T. W. Barry, vice president, and Edw. D. Krebs secretary-treasurer.

R. G. "Tommy" Thompson has been appointed by **Climax Industries, Inc.** as sales manager of the LPG division, Tulsa, Okla., as of Oct. 1. "Tommy" was associated with the Skelgas Division of Skelly Oil Co. since 1941 as a special representative. As a Tech-Sergeant in the Army Air Craft Ordnance, World War II, he spent two years in the European theater operations. After the war, he returned to Skelly Oil Co. as a special zone supervisor.

R. S. THOMPSON

Mr. Thompson has a wide acquaintanceship with butane-propane tank manufacturers throughout the southwest. Many of those manufacturers, as well as LP-Gas dealers, will remember his traveling the southwest for Butane Equipment Co.

Lee W. Rasch, at a recent board of directors meeting, was elected vice president of **Security Manufacturing Co.**, Kansas City, Missouri. He will be in complete charge of production, engineering and purchasing. Mr. Rasch was formerly connected with the American Gas Products Corp. and later with the American Radiator and Standard Sanitary Corp. of New York.

In 1940 he joined the Security staff as chief engineer, in which capacity he served until 1943. In that year he was ordered to active duty in the United States Navy and after serving two and one-half years was placed on inactive duty with the rank of lieutenant.

Keith Clevenger, widely known in petroleum and utility circles, as well as in the natural gas, natural gaso-

Exclusive DISTRIBUTORS

REGO

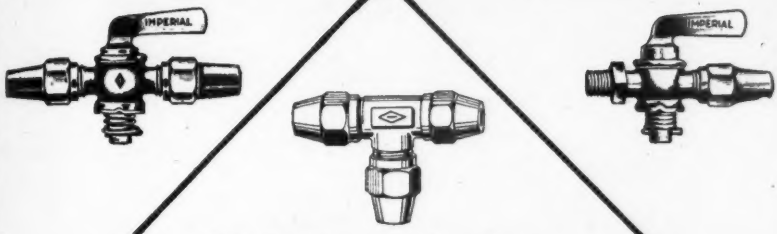
in SOUTHERN CALIFORNIA
ARIZONA and NEW MEXICO

See RegO Advertisement on Pages 84 and 85.

Western Gas Equipment Co.

Office and Warehouse
202 N. GARFIELD, P. O. Box A
MONTEREY PARK • CALIFORNIA
Phone Cumberland 3-2239

BRASS FITTINGS • COPPER TUBING • TOOLS FOR TUBING • VALVES & COCKS



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MIDLAND PARTS & BEARINGS CO.

IRVING, KANSAS

Or 1418-A Grand Ave., Kansas City, Mo.

"LINCOLN propane or butane tanks are your BEST BUY!"

Ralph Beisner

BUTANE AND PROPANE TANKS

Spheres or Cylindrical Type

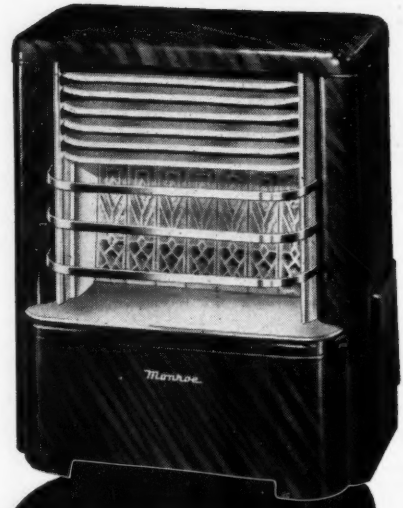
Transports—Storage—Mobile

"Built to Your Satisfaction"

Under API-ASME and ASME Codes

LINCOLN MANUFACTURING COMPANY

8680 Otis Street, Southgate, California Phone: LUcas 7181



You'll Sell More Monroe L.P.G. HEATERS

—*because they* **OFFER MORE**

In every Monroe Gas Heater you get all these exclusive, sales-clinching features . . . The famous GASMASTER Burner, unsurpassed for its efficiency and economy—Beautiful Kool Kabinets, greatest of safety features — Patented Interiors — Warm-Flor Radiants for warmer floors—Infra-Red Radiation. These and other engineered features, that assure years of service free operation, convince prospects Monroe Heaters are the best buy.

Full line of Vented and Unvented Heaters especially designed and engineered for L.P.G.

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Newark, N. J.—Columbus, O.—Omaha, Nebr.—San Francisco, Calif. Sales Office: Dallas, Texas

KEITH CLEVENGER

line, and liquefied petroleum gas business of the Mid-Continent and Southwest, has joined **Southern Gas & Equipment Co.**, Tulsa, Okla., in the capacity of sales promotion and advertising manager, according to an announcement by Frank P. DeLarzelere, president of the company. He assumed his new duties Oct. 1, with offices at company headquarters in the Atco building.

Prior to going with Southern Gas & Equipment Co., Mr. Clevenger had been associate publisher of Natural Gases magazine. For a number of years he was public relations director for the Empire Gas & Fuel Co. (now Cities Service Oil Co.), with headquarters in Bartlesville, Okla., going from that position to the American Gas Association in New York, as director of advertising and publicity.

Mr. DeLarzelere, in making the announcement of Mr. Clevenger's appointment, said: "The rapid development of the liquefied petroleum gas industry, particularly since the end of military hostilities, and the consequent growth of Southern Gas & Equipment Co., made necessary the inauguration of a full-time sales promotion and advertising department. We feel, therefore, that our selection of Mr. Clevenger to head and direct this work is a happy one."

Pennsylvania Range Boiler Co. announces that S. M. Koltun, graduate of University of Wisconsin, formerly assistant chief test engineer of Cleveland Testing Laboratories of the

Immediate delivery on

LPG SYSTEMS

Shipments from Bessemer, Alabama, ASME Underwriter Approved Tanks, 125 to 200 pound working pressure, aboveground or underground.

Eight years' experience in building quality tanks.

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Carter high quality Butane and Propane are unsurpassed as domestic and industrial fuels. Bulk loading points, St. Elmo, Illinois, Seminole and Stonewall, Oklahoma. Wholesale only. Your inquiries are solicited.

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TULSA, OKLAHOMA

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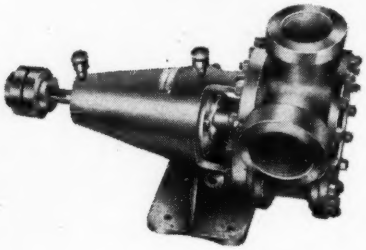
MOTOR
We Can Supply The Right
PUMP



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Sturdy, long-lived, turbine type pump to fit your motor now available from our stock.

**FOR TRANSFER-
TANK CAR UNLOADING-
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Let us hear from you—stating your requirements.

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L P GAS EQUIPMENT DEPT.
206 E. Grand Ave.
OKLAHOMA CITY 2, OKLA.
Tel. LD 765, 7-6517

American Gas Association, has joined its staff as engineer in charge of development and research.

Mr. Koltun will also assist F. A. Riley, manager of Pennsylvania Range's Heater division.

Halvard Lintvedt has been appointed general superintendent of Plants No. 1 and 2, Kalamazoo, Mich., of the **Ruud Manufacturing Co.**, makers of gas water heaters, it is announced by R. H. Lewis, company president.

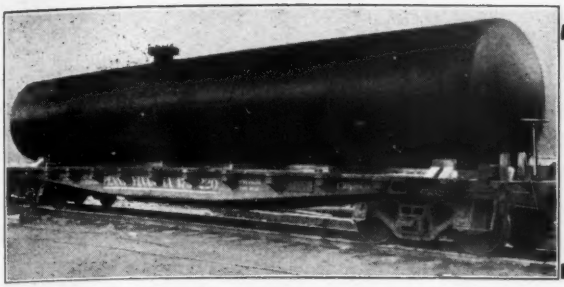
A. J. Komich, who was recently discharged from the U. S. Navy with the rank of Lieutenant-Commander, has been appointed to the New England sales staff of the **Pittsburgh Equitable Meter Division, Rockwell Manufacturing Co.** He will work from the Boston, Mass., office under the direction of F. C. Arens, district manager.

Mr. Komich will represent the company in the states of Massachusetts, Maine, New Hampshire and Vermont.

George J. Papas has been appointed general manager of purchases for the **Rheem Manufacturing Co.**, it is announced by W. E. Curran, vice president.

He will make his headquarters in New York City and will direct purchasing for the company's 11 plants in the United States. He joined Rheem, manufacturers of steel shipping containers and basic household appliances, over five years ago in Chicago.

Ground has been broken for an addition to the plant of the **Moore Corp.**, Joliet, Ill., maker of gas heaters and gas, coal and combination ranges, which, according to announcement recently by Bernard J. Hank, president of the company, is the first step in a modernization program to cost several hundred thousand dollars and



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Know VIKING PUMPS and you know why they are rugged . . . simple . . . dependable. There are no blades, springs, gadgets, timing gears or a mass of other devices required to make them work or help improve and retain efficiency.

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Know VIKINGS and what they can do for you.

Send for free bulletin 2302B today.

See Our Catalog In SWEETS

VIKING
Pump Company
CEDAR FALLS, IOWA

require until the end of next year or early in 1948 for completion.

The improvements will involve the virtual rebuilding of the factory and will increase production capacity tenfold.

E. R. Gilmore, who has been chief engineer of Emco products, has been appointed chief engineer of the Pittsburgh Equitable Meter Division of **Rockwell Manufacturing Co.**

Mr. Gilmore will be in charge of engineering and development of the meters and regulators built by the division for the control of gas, gasoline and oil.

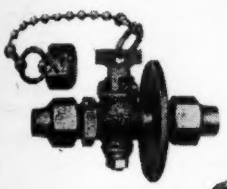
Calor Gas Co.'s G. P. Contract Not Exclusive in California

The following self-explanatory letter has been received from Miss Faith H. Rossiter, of the Calor Gas Co., Oakland, Calif:

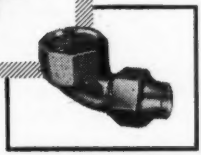
"Apparently the lead-off paragraph in our story (September issue, BUTANE-PROPANE *News*) has created a great deal of confusion in the minds of existing General Petroleum products dealers in the State of California. General Petroleum Corp. tells us that they have had many inquiries from their distributors—who probably read no further than the first paragraph—as to whether or not they would have to clear their distribution of liquefied petroleum gas products through Calor Gas Co.

"We would, therefore, greatly appreciate a note in your next issue to the effect that Calor Gas Co. does not have exclusive distribution of General Petroleum Corp. liquefied petroleum gas products in the State of California; that such exclusive distribution applies only to the States of Washington, Oregon, Idaho, Montana and Utah."

Designed TO MEET LP-GAS NEEDS



No. 7665 Floor Stop



No. 9500 Stove Elbow

Hays has worked closely with LP-Gas Engineers, to design and produce a complete line of stops and fittings for every installation need, for use with flared tubing. Couplings are included, no other fittings or adapters are necessary.

Illustrated are No. 7665 Floor Stop, ideal for temporary disconnections, with adjustable flange, and with or without cap and chain, ⅜" or ½" tubing (o.d. sizes); and No. 9500 Copper to Female I.P. Stove Elbow, ⅜" or ½" tubing (o.d. sizes) x ¾" iron pipe.

Send us your requirements, for complete information and specifications.

Write for NEW LP-Gas Folder 101

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Approved: California Industrial Safety Division No. 2099. Louisiana Liquefied Petroleum Gas Commission. Texas Railroad Commission. Inlet pressure—up to 250 lbs. tank pressure. Outlet pressure—11 in. water column. Capacity—400 c.f.h. Plus. Fittings—inlet P.O.L., outlet ¾".

Available for Immediate Delivery

On request we will be pleased to send you the performance chart on the HELCO Regulator 100-A.

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Trailer Cylinder Order Explained

IN view of some misunderstanding and much speculation regarding an announcement made last month relative to the use of ICC cylinders in trailers, BUTANE-PROPANE *News* asked F. R. Fetherston, vice president of the Liquefied Petroleum Gas Association, for an explanation. Mr. Fetherston's letter in reply is printed below:

"This will acknowledge your telegram in which you comment upon the statement that appeared in the October, 1946, issue of BUTANE-PROPANE *News*, page 136. I wish to preface my remarks by saying that I did not authorize the release that was published but recognize the abstracts as having been taken from a letter that I wrote in August commenting upon trailer installations. I think that if the whole letter had been quoted there would have been no misunderstanding.

Question of Jurisdiction

"The fact is we were concerned about the use of containers on motor truck trailers that come within the jurisdiction of ICC. The point of my original letter was to show how the ICC had assumed authority over intrastate movement of hazardous commodities by private carriers as well as common and contract carriers. The one point that was not brought out in the abstract published in BUTANE-PROPANE *News* is the question of ultimate jurisdiction, and by that I mean—When is a person considered to be engaged in commerce?

"I know that it is the view of the ICC, for I have discussed the point

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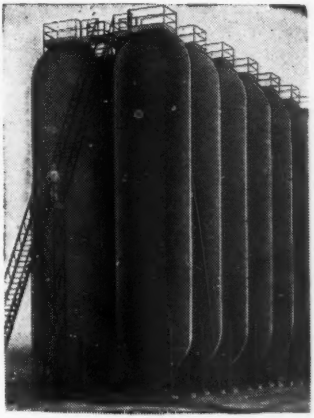
Graver-built bullets and spheres are providing safe, dependable LPG storage in all parts of the country. You can rely on Graver to provide LPG storage that meets every demand for safety and service. Shop built and field erected, Graver bullets and spheres meet all ASME Code requirements, and are available in any size or capacity to meet your needs.



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A complete line of Vented and Unvented Quality heaters. Their Ultra Smart Appearance, Outstanding L.P.G. Performance and many Exclusive Features create unprecedented user enthusiasm. You are assured satisfied customers and decidedly lower service costs when you sell this fine line.

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FAMOUS HI-CROWN BURNER

BLUE FLAME PILOT LIGHT

Leading L.P.G. Distributors from coast to coast rate it the finest of all burners for Butane. It "performs" without coaxing, constant cleaning or adjusting. Its quiet, odorless operation, great flexibility and reserve capacity insures your customers being completely satisfied.

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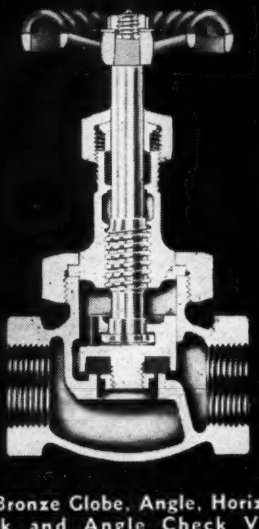

OIC Bronze Globe, Angle, Horizontal Check and Angle Check Valves for Your LP-Gas Equipment.

Gas SOUTHERN Systems

SOUTHERN GAS & EQUIPMENT CO.

TULSA, OKLAHOMA

BRANCHES: Sapulpa and Enid, Oklahoma
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SOUTHERN GAS & EQUIPMENT COMPANY OF TEXAS — Houston

with representatives of that body, that the Commission does not consider that it has jurisdiction over a container that is moved in a private vehicle unless that movement is involved in commerce. For instance, the owner of a trailer has a container installed in the trailer for the purpose of storing gas. Unless that container is removed from the trailer, and offered for transportation in either interstate or intrastate commerce, the ICC has no jurisdiction over it.

Needs Legal Ruling

"However, if the container is removed, and offered for transportation, the Commission Regulations forbid its transportation by common, contract or private carrier, unless constructed in accord with ICC Specifications and maintained in accord with ICC Regulations. I must admit that competent legal authority should, and eventually may have to rule upon what constitutes commerce, and when a private vehicle may be considered as 'engaged in commerce.'

"There is another phase to this question which interests the Association and that is standardization for the purpose of uniformity and ultimate safety. As you know, trailers circulate all over the country. One of their great problems is that of getting gas service wherever they may be. The vast majority of companies in the LP-Gas business have rules which govern the activities of their employes with respect to the filling of containers. We know that in a great many filling plants where cylinders are handled, the company forbids employes to fill any container that does does not comply with ICC Specifications.

"There is no intent to intimate that a container designed to ASME Speci-

3rd EDITION

Handbook
BUTANE-PROPANE GASES

342 Pages of Up-to-Date LP-Gas Information, Charts, Diagrams and Photographs

$5.00

CHECK THE CONTENTS

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Chapter 1: The Progress of the Industry and the History of its Development.
Chapter 2: The ABC of LP-Gas, an Introduction to LP-Gas Operations.

PART 2. PHYSICAL AND CHEMICAL PROPERTIES

Chapter 1: Properties of the Hydrocarbons in LP-Gas.
Chapter 2: Properties of Butane-Propane Mixtures.
Chapter 3: Volume Correction Factors.
Chapter 4: Analytical Determination and Testing.

PART 3.—PRODUCTION OF LP-GAS

Chapter 1: Natural Gasoline Plants, Recycling Plants, Oil Refineries.

PART 4. TRANSPORTATION AND STORAGE

Chapter 1: Delivery by Truck, Rail, Water, and Pipe Line.
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Chapter 3: Liquid Metering and Pumping Systems.

PART 5.—DISTRIBUTION OF LP-GAS

Chapter 1: Installing and Servicing LP-Gas Systems.
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Chapter 3: Bottled Gas Systems.
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PART 6. UTILIZATION OF LP-GAS

Chapter 1: Comparative Performance With Other Fuels.
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Chapter 3: Domestic Applications.
Chapter 4: Commercial Applications
Chapter 5: Industrial Applications.
Chapter 6: Enrichment, Peak Load and Stand-by Uses.
Chapter 7: A Fuel for Internal Combustion Engines.

PART 7. REGULATIONS

Section 1: N.B.F.U. Pamphlet No. 58.
Section 2: Motor Carrier Regulations.
Section 3: Freight Regulations.
Section 4: Unloading Tank Cars.
Section 5: Marine Regulations.

PART 8. APPENDIX

Section 1: Products Liability Insurance.
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PUBLIC LIABILITY INSURANCE

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Motor Vehicle Coverage and/or Workmen's Compensation Coverage

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(See March, 1946, Butane-Propane NEWS, Page 19, for complete explanation of coverage.)

•

This agency does not deal through local agents owing to the special hazards involved. All inquiries must be directed to—

LOUIS H. COLLAR
Manager
Liquefied Petroleum Gas Insurance Underwriters

1913 Tauromee Ave., Phone: DRexel 3331
Kansas City 2, Kansas

fications is not adequate for the purposes for which it was originally intended. The great drawback, however, to the use of such containers for trailer use is that the rank and file of the LP-Gas industry cannot identify the service for which the container was designed.

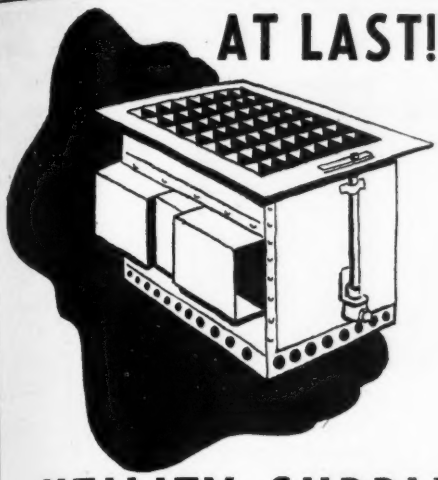
Safety Angle Involved

"This difficulty could be readily overcome if the industry would standardize on ICC design for LP-Gas trailer containers and construct them for propane service. This would result in universal acceptance of the container and minimize the hazard of refilling the container with any product normally used in the LP-Gas industry.

"I have noted your comment about opposition among California manufacturers to the use of ICC cylinders. As far as I am concerned this discussion is confined to the consideration of what is ultimately best from the point of view of safety for trailer owners and the LP-Gas industry as a whole.

"The containers used on trailers are relatively small and in general become involved in transportation simply because the container has to be removed from the trailer in order to refill it. These trailers do not necessarily stay within the jurisdiction of any one State and therefore such equipment should logically be acceptable for transportation in any State. This qualification can only be met through the use of ICC Specifications.

"F. R. FETHERSTON
"Vice-President
"Liquefied Petroleum Gas Association"



AT LAST!

A floor furnace built especially for trailers. Adaptable to small rooms, cabins and bathrooms. Size 10" by 14" by 10" deep. Abundant heat—extra space—no wall sweating.

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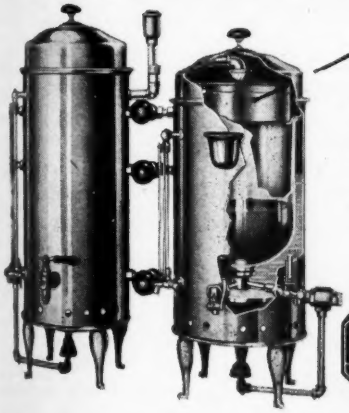
Exclusively Wholesale for LPG Dealers

LOAD BUILDERS for you

TRI-SAVER COFFEE URNS make perfect coffee without urn bags or filter paper



● Your customers among the commercial cooking establishments will like Tri-Saver urns. They eliminate urn bags and filter paper. Tri-Saver urns are made of long-lasting stainless steel. "Sealweld" burnout-proof construction eliminates leaks and burnouts. You'll increase LP Gas sales and build good will when you sell America's finest coffee urns.

Send for catalog giving full details about these unusual load-builders.

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Wm. H. Alderdice, Commercial Shearing & Stamping Co., Dies

W. H. ALERDICE

William H. Alderdice, long associated with the Commercial Shearing and Stamping Co., Youngstown, Ohio, passed away Sept. 24.

At the time of his death Mr. Alderdice was Western regional sales manager for his company, covering the Pacific Coast, Mountain States area, and the Southwest.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of BUTANE-PROPANE *News*, published monthly at Los Angeles, California, for October 1, 1946.

State of California, County of Los Angeles —ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Jay Jenkins, who, having been duly sworn according to law, deposes and says that he is the publisher of the BUTANE-PROPANE *News*, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses, of the publisher, editor, managing editor, and business managers are: Publisher, Jay Jenkins, 1709 W. 8th St., Los Angeles 14, Calif.; Editorial Director, Elliott Taylor, 52 Vanderbilt Ave., New York, N. Y.; Editor, Lynn C. Denny, 1709 W. 8th St., Los Angeles 14, Calif.

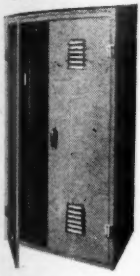
2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

OXFORD BOTTLED GAS CABINETS

for Long and Satisfactory Service

(Right) Dual Hood Type

(Below) Full Size Cabinet



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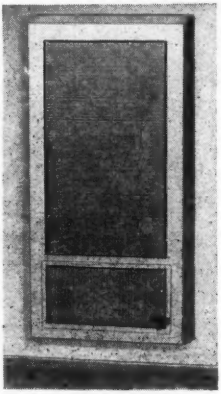
For Butane, Propane or Natural Gas.



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3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown is . . . (This information is required from daily publications only.)

JAY JENKINS (Signature of Publisher)

Sworn to and subscribed before me this 25th day of September, 1946.

[Seal] SUSAN McCONNELL.

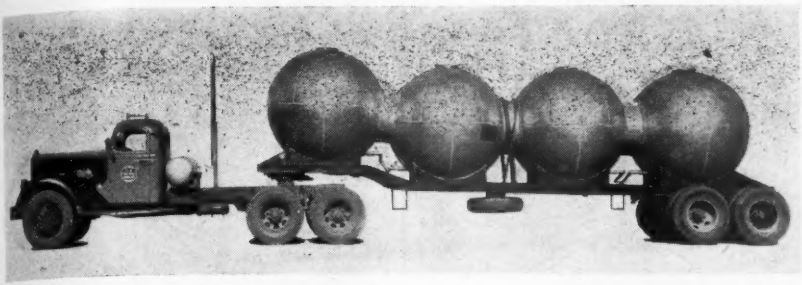
(My commission expires June 4. 1947.)

New Propane Gas Plant Completed at Darlington, Fla.

The People's Gas Co., Darlington, Fla., has installed a new plant for the production of propane gas, it has been announced by C. W. Davis, Darlington representative.

Work has been underway for the past three months installing the equipment. The new system will store the equivalent of 12,000,000 cubic feet of gas. This will enable the gas company to supply a greatly increased demand for gas in Florence and Darlington.

The conversion of the Florence and Darlington system took place Oct. 7.



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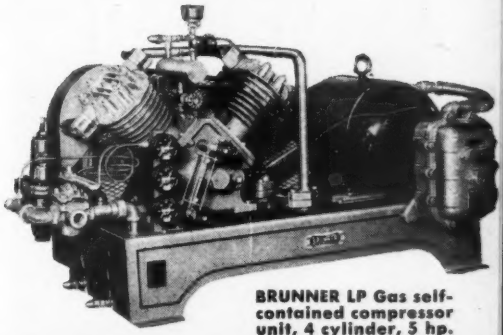

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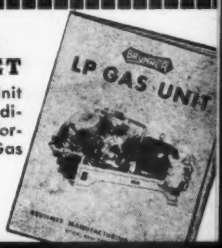

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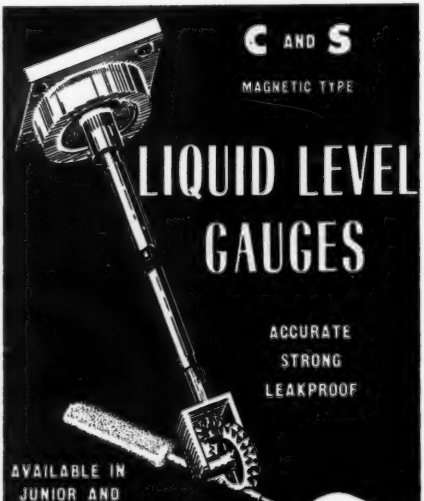

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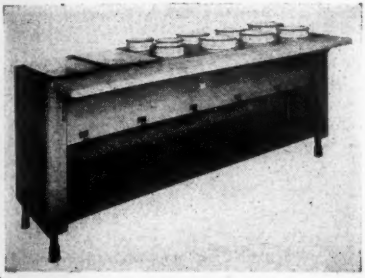

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HELP WANTED

WANTED — EXPERIENCED AND QUALIfied man to manage Propane and Butane Branch in rural area. Write Pacific Truck Service, 600 Park Avenue, San Jose, Calif., stating experience and salary desired.

SITUATIONS WANTED

GENERAL MANAGER OF PUBLIC UTILity and Bottled Gas Business, five years of experience, wishes managerial connection with L. P. Gas business. Must have good future. Box 900, BUTANE-PROPANE *News*, 1709 W. 8th St., Los Angeles 14, California.

YOUNG COMPETENT SALES EXECUTIVE, former District Manager large, modern L.P.G. retail sales and service branch installation. Thoroughly familiar with Bulk Plant, Cylinder, and Underground systems; Butane, Propane and modern retail L.P.G. Appliance Merchandising techniques. Twelve years executive experience in retail merchandising administration. Recently returned from overseas service. Desire new affiliation. Best references. Box 840, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

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75—NEW 24" DIAMETER, 51 TO 62.9 WATER gallon capacity, 200 lb. W. P. ASME constructed motor fuel tanks. Lengths 30" — 33" — 36". Tanks are completely fitted.

10—500 WATER GALLON CAPACITY, 125 lb. W. P. ASME propane-butane skid tanks. Tanks completely fitted including rotary gauge. Viking hand pump, vapor return and filler hose. Tanks recently have been in service and are in good condition.

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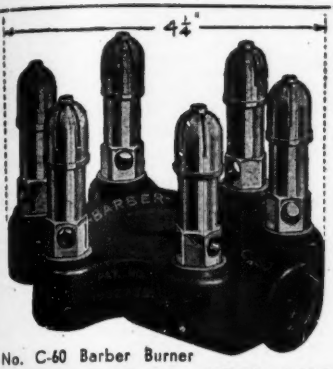
FOR SALE—STOVE ORIFICES ¼, ⅜, and ½ Flare Nuts, and other L.P.G. fittings. Write Fuelgas Co., 5905 N. Saginaw St., Flint, Michigan.

FOR SALE—BUTANE PROPANE TANKS—Two mounted on steel 4-wheel trailer. Excellent condition. 165 gal. capacity. Reasonable at $275. OLD PLANTATION CO., 10920 W. Washington Blvd., Culver City, Calif. Phone AShley 4-2022.



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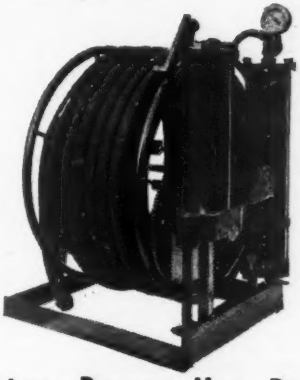

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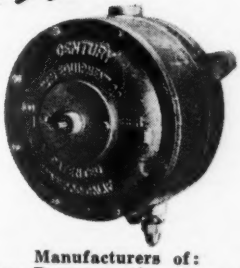

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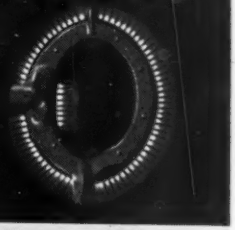

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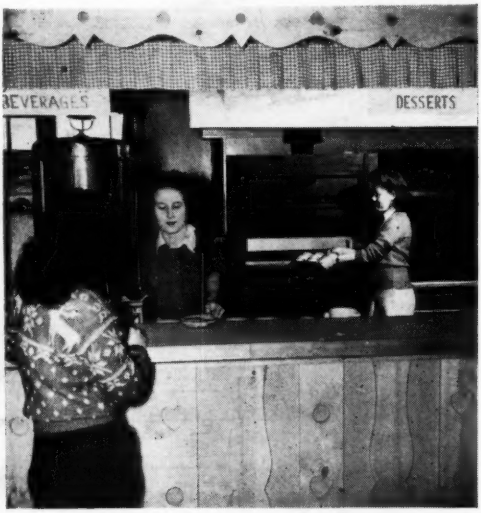

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W. H. ALERDICE

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At the time of his death Mr. Alderdice was Western regional sales manager for his company, covering the Pacific Coast, Mountain States area, and the Southwest.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of BUTANE-PROPANE *News*, published monthly at Los Angeles, California, for October 1, 1946.

State of California, County of Los Angeles —ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Jay Jenkins, who, having been duly sworn according to law, deposes and says that he is the publisher of the BUTANE-PROPANE *News*, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses, of the publisher, editor, managing editor, and business managers are: Publisher, Jay Jenkins, 1709 W. 8th St., Los Angeles 14, Calif.; Editorial Director, Elliott Taylor, 52 Vanderbilt Ave., New York, N. Y.; Editor, Lynn C. Denny, 1709 W. 8th St., Los Angeles 14, Calif.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

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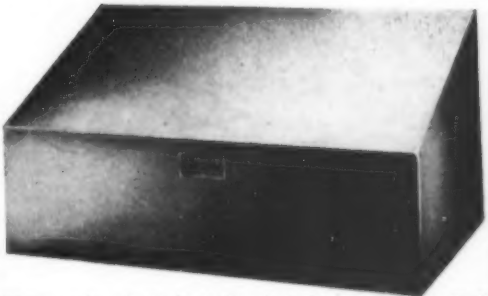
for Long and Satisfactory Service

(Right) Dual Hood Type

(Below) Full Size Cabinet



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WALL WARMOLATOR
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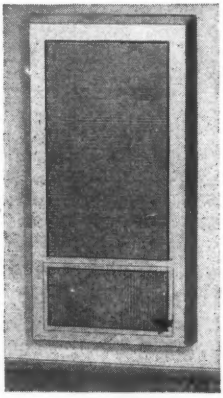

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4. That the two paragraphs next above giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

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JAY JENKINS (Signature of Publisher)

Sworn to and subscribed before me this 25th day of September, 1946.

[Seal] SUSAN McCONNELL

(My commission expires June 4, 1947.)

New Propane Gas Plant Completed at Darlington, Fla.

The People's Gas Co., Darlington, Fla., has installed a new plant for the production of propane gas, it has been announced by C. W. Davis, Darlington representative.

Work has been underway for the past three months installing the equipment. The new system will store the equivalent of 12,000,000 cubic feet of gas. This will enable the gas company to supply a greatly increased demand for gas in Florence and Darlington.

The conversion of the Florence and Darlington system took place Oct. 1.

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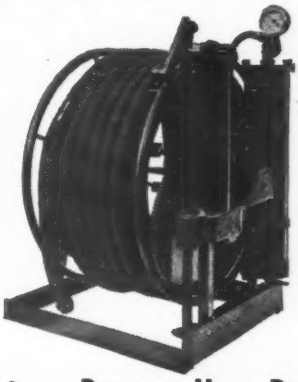

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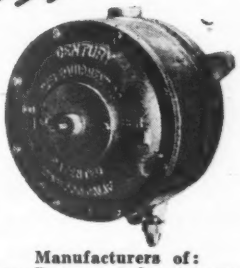

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